

Set	Items	Description
?	e	au=krieg, arthur

Ref	Items	Index-term
E1	1	AU=KRI EG ANJA
E2	1	AU=KRI EG ARI BERT
E3	7	*AU=KRI EG ARTHUR
E4	1	AU=KRI EG ARTHUR F
E5	11	AU=KRI EG ARTHUR F.
E6	73	AU=KRI EG ARTHUR M
E7	253	AU=KRI EG ARTHUR M
E8	2	AU=KRI EG B
E9	273	AU=KRI EG B.
E10	4	AU=KRI EG B. L.
E11	9	AU=KRI EG B. L.
E12	1	AU=KRI EG B. L. (PACI FI C GAS AND ELECTRI C CO. , SAN

Enter P or PAGE for more

? s e3- e7

7	AU=KRI EG ARTHUR
1	AU=KRI EG ARTHUR F
11	AU=KRI EG ARTHUR F.
73	AU=KRI EG ARTHUR M
253	AU=KRI EG ARTHUR M
S1	345 E3- E7

? s s1 and backbone

345	S1
281168	BACKBONE
S2	4 S1 AND BACKBONE

? s s2/3, k/ 1-4

>>>Invalid syntax

? t s2/3, k/ 1-4

>>>KW C option is not available in file(s): 399

2/3, K/ 1 (Item 1 from file: 399)

DIALOG(R) File 399: CA SEARCH(R)

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139132442 CA: 139(9) 132442u PATENT

Methods and products for enhancing immune responses using imidazoquinoline compounds in combination with modified immunostimulatory oligonucleotide

INVENTOR(AUTHOR): Krieg, Arthur M; Schetter, Christian; Bratzler, Robert L.; Vollmer, Jorg; Jurk, Marion; Bauer, Stefan

LOCATION: USA

ASSIGNEE: University of Iowa Research Foundation

PATENT: U. S. Pat. Appl. Publ. ; US 20030139364 A1 DATE: 20030724

APPLICATI ON: US 272502 (20021015) *US PV329208 (20011012)

PAGES: 112 pp. CODEN: USXXCO LANGUAGE: English

PATENT CLASSI FI CATI ONS:

CLASS: 514044000; A61K-048/00A; A61K-038/00B; G01N-033/53B; A61K-031/56B; A61K-031/522B; A61K-031/4745B

2/3, K/ 2 (Item 2 from file: 399)

DIALOG(R) File 399: CA SEARCH(R)

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138203655 CA: 138(14) 203655h PATENT

Oligonucleotides containing stimulatory phosphorothioate motif and neutralizing motif for treating infections, allergies and cancers

10789353a.txt

INVENTOR(AUTHOR): Krieg, Arthur M; Vollmer, Jorg; Ullman, Eugen
LOCATION: USA
ASSIGNEE: Coley Pharmaceutical Group, Inc.; Coley Pharmaceutical GmbH.
; University of Iowa Research Foundation
PATENT: PCT International ; WO 200315711 A2 DATE: 20030227
APPLICATION: WO 2002US26468 (20020819) *US PV313273 (20010817) *US
PV393952 (20020703)
PAGES: 115 pp. CODEN: PIXXD2 LANGUAGE: English
PATENT CLASSIFICATIONS:
CLASS: A61K-000/A
DESIGNATED COUNTRIES: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BY; BZ;
CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DZ; EC; EE; ES; FI; GB; GD; GE; GH;
GM; HR; HU; ID; IL; IN; IS; JP; KE; KG; KP; KR; KZ; LC; LK; LR; LS; LT; LU;
LV; MA; MD; MG; MK; MN; MW; MX; MY; NZ; OM; PH; PL; PT; RO; RU; SD; SE;
SG; SI; SK; SL; TJ; TM; TN; TR; TT; TZ; UA; UG; UZ; VN; YU; ZA; ZW AM; AZ;
BY; KG; KZ; MD; RU; TJ; TM DESIGNATED REGIONAL: GH; GM; KE; LS; MW; MZ; SD
; SL; SZ; TZ; UG; ZM; ZW AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR;
GB; GR; IE; IT; LU; MC; NL; PT; SE; SK; TR; BF; BJ; CF; CG; CI; CM; GA; GN;
GQ; GW; ML; MR; NE; SN; TD; TG

2/3, K/3 (Item 3 from file: 399)
DIALOG(R) File 399: CA SEARCH(R)
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129023430 CA: 129(3)23430m PATENT
Immunostimulatory nucleic acid molecules
INVENTOR(AUTHOR): Krieg, Arthur M; Kline, Joel N.
LOCATION: USA
ASSIGNEE: University of Iowa Research Foundation; Krieg, Arthur M;
Kline, Joel N.
PATENT: PCT International ; WO 9818810 A1 DATE: 19980507
APPLICATION: WO 97US19791 (19971030) *US 738652 (19961030)
PAGES: 110 pp. CODEN: PIXXD2 LANGUAGE: English
PATENT CLASSIFICATIONS:
CLASS: C07H-021/00A; C07H-021/02B; C07H-021/04B; A61K-031/175B;
A61K-031/335B; A61K-031/47B; A61K-031/70B
DESIGNATED COUNTRIES: AL; AM; AT; AU; AZ; BA; BB; BG; BR; BY; CA; CH; CN;
CU; CZ; DE; DK; EE; ES; FI; GB; GE; GH; HU; IL; IS; JP; KE; KG; KP; KR; KZ;
LC; LK; LR; LS; LT; LU; LV; MD; MG; MK; MN; MW; MX; NO; NZ; PL; PT; RO; RU;
SD; SE; SG; SI; SK; SL; TJ; TM; TR; TT; UA; UG; US; UZ; VN; YU; ZW AM; AZ;
BY; KG; KZ; MD; RU; TJ; TM DESIGNATED REGIONAL: GH; KE; LS; MW; SD; SZ; UG
; ZW AT; BE; CH; DE; DK; ES; FI; FR; GB; GR; IE; IT; LU; MC; NL; PT; SE;
BF; BJ; CF; CG; CI; CM; GA; GN; ML; MR; NE; SN; TD; TG

2/3, K/4 (Item 4 from file: 399)
DIALOG(R) File 399: CA SEARCH(R)
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123217687 CA: 123(17)217687x JOURNAL
Oligonucleotides with novel, cationic backbone substituents:
aminoethyl phosphonates
AUTHOR(S): Fathi, Reza; Huang, Qing; Coppola, George; Delaney, William
Teasdale, Rebecca; Krieg, Arthur M; Cook, Alan F.
LOCATION: PharmaGenics, Inc., Allendale, NJ, 07401, USA
JOURNAL: Nucleic Acids Res. DATE: 1994 VOLUME: 22 NUMBER: 24 PAGES:
5416-24 CODEN: NARHAD ISSN: 0305-1048 LANGUAGE: English
? s backbone(w) modif? and (phos? or ?phos?)
Processing
Processing
Processing
Processed 10 of 56 files ...

Processing
 Processing
 Processing
 Processed 50 of 56 files ...
 Processing
 Processing
 Completed processing all files

1229 S3
 15528524 IMMUNO?
 979 INIHI BIT?
 316 ?IMMUNO?
 119 ?SUPPRE?
 163510 ?STIMUL?
 S4 175 S3 AND (IMMUNO? OR INIHI BIT? OR ?IMMUNO? OR ?SUPPRE? OR
 ?STIMUL?)

? rd

>>>Duplicate detection is not supported for File 393.

>>>Duplicate detection is not supported for File 391.

>>>Records from unsupported files will be retained in the RD set.

S5 113 RD (unique items)
 ? s s5 and ?tcgtcggttttgcgttttttcga?

Processed 10 of 56 files ...
 Processed 20 of 56 files ...
 Processed 30 of 56 files ...
 Processed 40 of 56 files ...
 Processed 50 of 56 files ...
 Completed processing all files

113 S5
 0 ?TCGTGTTTTGTGTTTTTTTTTGA?
 S6 0 S5 AND ?TCGTGTTTTGTGTTTTTTTTTGA?

?
 PLEASE ENTER A COMMAND OR BE LOGGED OFF IN 5 MINUTES
 ? ds

Set	Items	Description
S1	345	E3- E7
S2	4	S1 AND BACKBONE
S3	1229	BACKBONE(W MODIF? AND (PHOS? OR ?PHOS?)
S4	175	S3 AND (IMMUNO? OR INIHI BIT? OR ?IMMUNO? OR ?SUPPRE? OR ?S- TI MUL?)

S5 113 RD (unique items)
 S6 0 S5 AND ?TCGTGTTTTGTGTTTTTTTTTGA?

? t s5/3, k/1-15

>>>KW C option is not available in file(s): 399

5/3, K/1 (Item 1 from file: 5)
 DIALOG(R) File 5: Biosis Previews(R)
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0020822059 BIOSIS NO.: 200900162393

Immunostimulation and anti-DNA antibody production by backbone
 modified CpG-DNA

AUTHOR: Kim Dongbum; Rhee Jae Won; Kwon Sanghoon; Sohn Wern-Joo; Lee
 Younghee; Kim Dae-Won; Kim Doo-Sik; Kwon Hyung-Joo (Reprint)

AUTHOR ADDRESS: Hallym Univ, Coll Med, Ctr Med Sci Res, 39 Hallymdaehak
 Gil, Gangwon Do 200702, South Korea** South Korea

AUTHOR E-MAIL ADDRESS: hjoonwon@hallym.ac.kr

JOURNAL: Biochemical and Biophysical Research Communications 379 (2): p
 362-367 FEB 6 2009 2009

ITEM IDENTIFIER: doi: 10.1016/j.bbr.c.2008.12.063

ISSN: 0006-291X
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

Immunostimulation and anti-DNA antibody production by backbone modified CpG-DNA

ABSTRACT: Oligodeoxynucleotides containing immunostimulatory CpG motifs (CpG-DNA) have gained attention as potentially useful therapeutics. However, the phosphorothioate-modified CpG-DNAs (PS-ODN) can induce backbone-related side effects. Here, we compared the immunostimulatory activity of natural phosphodiester CpG-DNA (PO-ODN) from *Mycobacterium bovis* and PS-ODN in mice. Both PO-ODN...

...numbers. or IgM production. These results may provide an explanation for the side effects in immunotherapeutic application of PS-ODN. They also suggest that PO-ODN may be more optimal than...

... REGISTRY NUMBERS: phosphorothioate

DESCRIPTORS:

CHEMICALS & BIOCHEMICALS: IgM {immunoglobulin M...}

... phosphodiester; ...

... phosphorothioate -

METHODS & EQUIPMENT: immunostimulation - ...

... laboratory techniques, immunologic techniques

5/3, K/2 (Item 2 from file: 5)
DI ALOG(R) File 5: Biosis Previews(R)
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19332405 BIOSIS NO.: 200600677800
Synthesis and conformational studies of glycosylated beta-peptides
AUTHOR: Norgren A S (Reprint); Arvidsson P I
AUTHOR ADDRESS: Dept Biochem and Organ Chem, Uppsala, Sweden**Sweden
JOURNAL: Journal of Peptide Science 12 (Suppl. S): p101 2006 2006
CONFERENCE/MEETING: 29th European Peptide Symposium Gdansk, POLAND
September 03 - 08, 2006; 20060903
ISSN: 1075-2617
DOCUMENT TYPE: Meeting; Meeting Abstract
RECORD TYPE: Citation
LANGUAGE: English

DESCRIPTORS:

CHEMICALS & BIOCHEMICALS: ... phosphoryl residue

MISCELLANEOUS TERMS: ... backbone modification; ...

... immunodifferentiation;

CONCEPT CODES:

5/3, K/3 (Item 3 from file: 5)
DI ALOG(R) File 5: Biosis Previews(R)
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17657292 BIOSIS NO.: 200400028049
NF-kappaB-dependent regulation of tumor necrosis factor-alpha gene expression by CpG oligodeoxynucleotides.
AUTHOR: Kwon Hyung-Joo; Lee Keun-Wook; Yu Sang Ho; Han Jung Ho; Kim Doo-Sik
Page 5

(Reprint)

AUTHOR ADDRESS: Institute of Life Science and Biotechnology, Yonsei University, Seoul, 120-749, South Korea**South Korea

AUTHOR E-MAIL ADDRESS: dskim@yonsei.ac.kr

JOURNAL: Biochemical and Biophysical Research Communications 311 (1): p 129-138 November 7, 2003 2003

MEDIUM: print

ISSN: 0006-291X

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: Immunostimulatory activities of synthetic oligodeoxynucleotides containing CpG motifs (CpG-ODNs) have gained attention as potentially useful immunotherapeutics. However, CpG-ODNs induce harmful and lethal shock effects because they greatly enhance the sequence-dependent induction of tumor necrosis factor- α (TNF- α). We have shown that phosphorothioate-modified oligodeoxynucleotides (PS-ODNs) of the CpG-ODN 1826 stimulate TNF- α gene expression, TNF- α promoter activity, IkappaB degradation, and NF-kappaB activation at higher levels compared with its phosphodiester ODN (PO-ODN). In contrast to the effects of CpG-ODN 1826, PS-ODN of...

...the innate immune responses by modulating the potency of CpG-ODNs via sequence rearrangement and phosphorothioate backbone modification.

DESCRIPTORS:

CHEMICALS & BIOCHEMICALS: ...immunologic-drug...

...phosphodiester oligodeoxynucleotide...

...immunologic-drug

5/3, K/4 (Item 4 from file: 5)

DIALOG(R) File 5: Biosis Previews(R)

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17117859 BIOSIS NO.: 200300076578

Phosphorothioate backbone modification changes the pattern of responses to CpG

BOOK TITLE: Microbial DNA and host immunity

AUTHOR: Stacey Kathryn J (Reprint); Sester David P; Naik Shalin; Roberts Tara L (Reprint); Sweet Matthew J (Reprint); Hume David A

BOOK AUTHOR/EDITOR: Raz Eyal (Editor)

AUTHOR ADDRESS: Institute for Molecular Bioscience, University of Queensland, Brisbane, QLD, Australia**Australia

p63-77 2002

MEDIUM: print

BOOK PUBLISHER: Humana Press Inc., 999 Riverview Drive, Suite 208, Totowa, NJ, 07512, USA

ISBN: 1-58829-022-0 (cloth)

DOCUMENT TYPE: Book Chapter

RECORD TYPE: Citation

LANGUAGE: English

Phosphorothioate backbone modification changes the pattern of responses to CpG

DESCRIPTORS:

CHEMICALS & BIOCHEMICALS: ...phosphorothioate backbone...

... immunostimulatory DNA

5/3, K/5 (Item 5 from file: 5)
 DIALOG(R) File 5: Biosis Previews(R)
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16743375 BIOSIS NO.: 200200336886
 Phosphodiester QpG oligonucleotides as adjuvants: Polyguanosine runs
 enhance cellular uptake and improve immunostimulative activity of
 phosphodiester QpG oligonucleotides in vitro and in vivo
 AUTHOR: Dalpke Alexander H; Zimmermann Stefan; Albrecht Inka; Heeg Klaus
 (Reprint)
 AUTHOR ADDRESS: Institute of Medical Microbiology and Hygiene,
 Philipps-University Marburg, Pilgrimstein 2, 35037, Marburg, Germany**
 Germany
 JOURNAL: Immunology 106 (1): p102-112 May, 2002 2002
 MEDIUM: print
 ISSN: 0019-2805
 DOCUMENT TYPE: Article
 RECORD TYPE: Abstract
 LANGUAGE: English

Phosphodiester QpG oligonucleotides as adjuvants: Polyguanosine runs
 enhance cellular uptake and improve immunostimulative activity of
 phosphodiester QpG oligonucleotides in vitro and in vivo

... ABSTRACT: g. antigen-presenting cells (APC). The rate of uptake is
 influenced by the DNA's backbone modification and critically
 determines activity of QpG-DNA. QpG ODN with a phosphothioate
 backbone (PTO) are currently used for most in vivo and in vitro studies,
 since PTO...

... To circumvent these restrictions we investigated the effects of DNA
 sequence as well as DNA backbone modification on cellular
 uptake and resulting immunostimulation. We show here that uptake of
 phosphodiester (PO)-QpG ODN can be strongly enhanced by poly
 guanosine runs added at the 3' end of the ODN. In addition these ODN
 showed an improved immunostimulatory activity in vivo and in vitro.
 This included protection of mice against lethal Th2-dependent...

DESCRIPTORS:
 CHEMICALS & BIOCHEMICALS: ... phosphodiester QpG oligonucleotides
 ...

... cellular uptake, immunostimulative activity...

... phosphothioate backbone {PTO}

5/3, K/6 (Item 6 from file: 5)
 DIALOG(R) File 5: Biosis Previews(R)
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09634850 BIOSIS NO.: 198987082741
 CHARACTERIZATION OF A BROADLY EXPRESSED HUMAN LEUKOCYTE SURFACE ANTIGEN
 MEM-43 ANCHORED IN MEMBRANE THROUGH PHOSPHATIDYLINOSITOL
 AUTHOR: STEFANOVA I (Reprint); HILGERT I; KRISTOVA H; BROWN R; LOWME
 HOREJSI V
 AUTHOR ADDRESS: INST MOLECULAR GENETICS, CZECH ACAD SCI, VITENSKA 1083,
 14220 PRAHA 4, CZECH**CZECHOSLOVAKIA
 JOURNAL: Molecular Immunology 26 (2): p153-162 1989
 ISSN: 0161-5890

DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

CHARACTERIZATION OF A BROADLY EXPRESSED HUMAN LEUKOCYTE SURFACE ANTIGEN
MEM-43 ANCHORED IN MEMBRANE THROUGH PHOSPHATIDYLINOSITOL

... ABSTRACT: absent from U937, Nalm-6, Daudi and Raji cell lines. The antigen isolated by immunoaffinity chromatography from several cell lines is an 18,000-25,000 mol. wt glycoprotein. An...

... isolated from erythrocytes binds to several lectins and has a 14,000 mol. wt polypeptide backbone, modified by an endoglycosidase F-sensitive carbohydrate moiety. The epitope recognized is reduction-sensitive. The sequence...

... antigen Ly-6C. The antigen is completely released from the cell surface after treatment with phosphatidylinositol-specific phospholipase C.

DESCRIPTORS: ERYTHROCYTE PERIPHERAL BLOOD LEUKOCYTE MONOCLONAL ANTIBODY
MOLECULAR SEQUENCE DATA AMINO ACID SEQUENCE IMMUNOAFFINITY
CHROMATOGRAPHY

5/3, K/7 (Item 1 from file: 24)
DIALOG(R) File 24: CSA Life Sciences Abstracts
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0003940158 IP ACCESSION NO: 11177441
Is antisense an appropriate nomenclature or design for oligodeoxynucleotides aimed at the inhibition of HIV-1 replication?

Lavigne, Carole; Yelle, Jocelyn; Sauve, Gilles; Thierry, Alain R
Department de Microbiologie et Immunologie, Faculte de Medecine, Universite de Montreal, H3C 3J7 Montreal, Quebec, Canada,
[mailto:thierry1@micronet.fr]

AAPS Journal, v 4, n 2, p 34-44, June 2002
PUBLICATION DATE: 2002

PUBLISHER: American Association of Pharmaceutical Scientists

DOCUMENT TYPE: Journal Article
RECORD TYPE: Abstract
LANGUAGE: English
SUMMARY LANGUAGE: English
ISSN: 1550-7416
FILE SEGMENT: Virology & AIDS Abstracts
ABSTRACT:

We have evaluated the specificity and the variation in activity against human immunodeficiency virus (HIV) infection of antisense oligodeoxynucleotides (ODNs) with regard to factors such as dose-response range, number and choice of experimental controls, backbone modifications of the ODNs, type of cell infection, length of assays, and delivery approach. The highest...

... assay with MOLT-3 cells acutely infected with HIV-1 (IIIB) and treated with free phosphorothioate-modified ODNs (PS-ODNs). The highest level of specificity was observed in our short-term...

DESCRIPTORS: Antisense oligonucleotides; Antiviral activity; Data processing; Infection; Nomenclature; Oligonucleotides; Replication;

Human immunodeficiency virus 1

5/3, K/8 (Item 2 from file: 24)
 DIALOG(R) File 24: CSA Life Sciences Abstracts
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0002240493 IP ACCESSION NO: 4872273
 Site-Specific Administration of Antisense Oligonucleotides using
 Biodegradable Polymer Microspheres Provides Sustained Delivery and Improved
 Subcellular Biodistribution in the Neostriatum of the Rat Brain

Khan, A; Sommer, W; Fuxe, K; Akhtar, S
 Pharmaceutical Sciences Research Institute, Aston University, Aston
 Triangle, Birmingham B4 7ET, UK, [mailto: S.Akhtar@aston.ac.uk]

Journal of Drug Targeting, v 8, n 5, p 319-334, 2000
 PUBLICATION DATE: 2000

DOCUMENT TYPE: Journal Article
 RECORD TYPE: Abstract
 LANGUAGE: English
 SUMMARY LANGUAGE: English
 ISSN: 1061-186X
 FILE SEGMENT: Medical & Pharmaceutical Biotechnology Abstracts

ABSTRACT:
 ... site-specific delivery system for targeting ODNs to the neostriatum of
 the rat brain. Model phosphorothioate backbone-modified
 ODNs were entrapped within poly(D, L-lactide-co-glycolide) (PLAGA)
 microspheres using a double...

... and the fluorescence appeared to be diffuse covering both cytosolic and
 nuclear regions. Dual-label immunohistochemical analyses suggested
 that ODNs were mainly distributed to neuronal cells. These data indicate
 that site...

5/3, K/9 (Item 3 from file: 24)
 DIALOG(R) File 24: CSA Life Sciences Abstracts
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0002138198 IP ACCESSION NO: 4780087
 Phosphorothioate Backbone Modification Modulates
 Macrophage Activation by CpG DNA

Sester, DP; Naik, S; Beasley, SJ; Hume, DA; Stacey, KJ*
 Institute for Molecular Bioscience, University of Queensland, Brisbane
 4072, Australia, [mailto: K.Stacey@mb.uq.edu.au]

Journal of Immunology, v 165, n 8, p 4165-4173, October 15, 2000
 PUBLICATION DATE: 2000

DOCUMENT TYPE: Journal Article
 RECORD TYPE: Abstract
 LANGUAGE: English
 SUMMARY LANGUAGE: English
 ISSN: 0022-1767
 FILE SEGMENT: Immunology Abstracts; Nucleic Acids Abstracts

Phosphorothioate Backbone Modification Modulates
 Macrophage Activation by CpG DNA
 ABSTRACT:

10789353a.txt

Macrophages respond to unmethylated CpG motifs present in nonmammalian DNA. Stabilized phosphorothioate-modified oligodeoxynucleotides (PS-ODN) containing CpG motifs form the basis of immunotherapeutic agents. In this study, we show that PS-ODN do not perfectly mimic native DNA...

...CpG-containing PS-ODN were active at 10- to 100-fold lower concentrations than corresponding phosphodiester ODN in maintenance of cell viability in the absence of CSF-1, in induction of...

...components may contribute to this, as PS-ODN were slower and less effective at inducing phosphorylation of the extracellular signal-related kinases 1 and 2. In addition, at high concentrations, non-CpG PS-ODN specifically inhibited responses to CpG DNA, whereas nonstimulatory phosphodiester ODN had no such effect. Although nonstimulatory PS-ODN caused some inhibition of ODN uptake...

...did not adequately explain the levels of inhibition of activity. The results demonstrate that the phosphorothioate backbone has both enhancing and inhibitory effects on macrophage responses to CpG DNA.

DESCRIPTORS: Macrophages; phosphorothioate; oligodeoxynucleotides

IDENTIFIERS: CpG motifs; immunology

SUBJECT CATEGORIES: Immunological aspects

5/3, K/10 (Item 1 from file: 34)
DIALOG(R) File 34: Sci Search(R) Cited Ref Sci
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13195519 Genuine Article#: 857EB No. References: 41
Title: C-class CpG ODN: sequence requirements and characterization of immunostimulatory activities on mRNA level
Author: Jurk M (REPRINT); Schulte B; Kritzler A; Noll B; Uhlmann E; Wader T; Schetter C; Krieg AM; Vollmer J
Author Email Address: m.jurk@colleypharma.com
Corporate Source: Colley Pharmaceut GMBH, Elisabeth Selbert Str 9/D-40764 Langenfeld//Germany/ (REPRINT); Colley Pharmaceut GMBH, D-40764 Langenfeld//Germany/; Colley Pharmaceut Grp Inc, Wellesley//MA/
Journal: IMMUNOBIOLOGY, 2004, V209, N1-2, P141-154
ISSN: 0171-2985 Publication Date: 20040000
Publisher: URBAN & FISCHER VERLAG, BRANCH OFFICE JENA, P O BOX 100537, D-07705 JENA, GERMANY
Language: English Document Type: ARTICLE (ABSTRACT AVAILABLE)

Title: C-class CpG ODN: sequence requirements and characterization of immunostimulatory activities on mRNA level

...Abstract: sequence requirements of C-Class ODN regarding optimal IFN-alpha secretion. Sequence as well as backbone modifications like 2'-O-methyl modifications especially in the 5' part of the ODN influence IFN...

...Identifiers: PLASMACYTOID DENDRITIC CELLS; IFN-GAMMA PRODUCTION; HUMAN B-CELLS; BACTERIAL-DNA; PHOSPHOROTHIOATE OLIGODEOXYNUCLEOTIDES; IMMUNE STIMULATION; OLIGONUCLEOTIDE SEQUENCES; CXC CHEMOKINES; INTERFERON-ALPHA; T-CELLS

5/3, K/11 (Item 2 from file: 34)
DIALOG(R) File 34: Sci Search(R) Cited Ref Sci
(c) 2009 The Thomson Corp. All rights reserved.

10916029 Genuine Article#: 584MJ No. References: 45
Title: Is antisense an appropriate nomenclature or design for oligodeoxynucleotides aimed at the inhibition of HIV-1 replication? -

art. no. 9

Author: Lavigne C; Yelle J; Sauve G; Thierry AR (REPRINT)
 Corporate Source: Lab Def Antivirales & Antitumorales, UMR 5124, Medi nCell
 Project, Case Courrier 27, 1919, Route Mende/ F-34293 Montpellier
 5//France/ (REPRINT); Lab Def Antivirales & Antitumorales, UMR 5124,
 Medi nCell Project, F-34293 Montpellier 5//France/; Univ Quebec, Inst
 Armand Frappier, Laval/ PQ H7N 4Z3/ Canada/; NCI, Tumor Cell Biol Lab,
 NIH, Bethesda// MD/ 20892
 Journal: AAPS PHARMSCI, 2002, V4, N2, P9-9
 ISSN: 1522-1059 Publication Date: 20020000
 Publisher: AMER ASSOC PHARMACEUTICAL SCIENTISTS, 1650 KING ST, STE 200,
 ALEXANDRIA, VA 22314-2747 USA
 Language: English Document Type: ARTICLE (ABSTRACT AVAILABLE)

Abstract: We have evaluated the specificity and the variation in activity
 against human immunodeficiency virus (HIV) infection of antisense
 oligodeoxynucleotides (ODNs) with regard to factors such as
 dose-response range, number and choice of experimental controls,
 backbone modifications of the ODNs, type of cell infection,
 length of assays, and delivery approach. The highest...

... assay with MOLT-3 cells acutely infected with HIV-1 (IIIB) and treated
 with free phosphorothioate-modified ODNs (PS-ODNs). The highest
 level of specificity was observed in our short-term...
 ... Identifiers: HUMAN-IMMUNODEFICIENCY-VIRUS; SEQUENCE-SPECIFIC
 INHIBITION; CHRONICALLY INFECTED-CELLS; PHOSPHOROTHI OATE
 OLIGODEOXYNUCLEOTIDES; GENE-EXPRESSION; HTLV-III; TYPE-1;
 OLIGONUCLEOTIDES; PHARMACOKINETICS; RNA

5/3, K/12 (Item 3 from file: 34)
 DIALOG(R) File 34: Sci Search(R) Cited Ref Sci
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09609746 Genuine Article #: 4270G No. References: 32
 Title: Lipid-based delivery of combinations of antisense
 oligodeoxynucleotides for the in vitro inhibition of HIV-1 replication
 Author: Lavigne C (REPRINT); Yelle J; Sauve G; Thierry AR
 Corporate Source: Medi nCell Project, 6 Rue des Monts du Vivarais/ F-31240
 Lunion//France/ (REPRINT); Medi nCell Project, F-31240 Lunion//France/;
 Univ Montreal, Fac Med, Dept Microbiol & Immunol, Montreal/ PQ H3C
 3J7/Canada/; Univ Quebec, Inst Armand Frappier, Laval/ PQ H7N 4Z3/ Canada/;
 NCI, Tumor Cell Biol Lab, NIH, Bethesda// MD/ 20892
 Journal: AAPS PHARMSCI, 2001, V3, N1, PU86-U97
 ISSN: 1522-1059 Publication Date: 20010000
 Publisher: AMER ASSOC PHARMACEUTICAL SCIENTISTS, 1650 KING ST, STE 200,
 ALEXANDRIA, VA 22314-2747 USA
 Language: English Document Type: ARTICLE (ABSTRACT AVAILABLE)

... Abstract: a combination strategy in cell cultures including ODN
 concentrations, type of infection (acute vs chronic), backbone
 modification of the ODN, and the number of sequences. When
 delivered by the DLS carrier system...

... might block an early step of virus replication by combined inhibitory
 effects. Various combinations of phosphorothioate-modified (PS)
 and unmodified oligonucleotides delivered by the DLS system were
 compared for their antiviral...

... using HIV-T (IIIB strain)-infected MOLT-3 cells. The most effective
 combination had 3 phosphorothioate antisense ODNs: Srev, SDIS,
 and SPac (>99% inhibition at 100 pM). However, the additive effect...
 ... Identifiers: HUMAN-IMMUNODEFICIENCY-VIRUS; HTLV-III; TYPE-1 RNA;

10789353a.txt
PHOSPHOROTHIOATE; OLIGONUCLEOTIDES; SEQUENCE; PHARMACOKINETICS;
COMPLEMENTARY; EXPRESSION; AIDS

5/3, K/13 (Item 4 from file: 34)
DI ALOG(R) File 34: Sci Search(R) Cited Ref Sci
(c) 2009 The Thomson Corp. All rights reserved.

07244402 Genuine Article#: 140QK No. References: 42
Title: Coactivator OBF-1 makes selective contacts with both the
POU-specific domain and the POU homeodomain and acts as a molecular
clamp on DNA
Author: Sauter P; Matthias P (REPRINT)
Corporate Source: FRIEDRICH MIESCHER INSTIT, MAULBEERSTR 66, POB 2543/ CH-4058
BASEL// SWITZERLAND/ (REPRINT); FRIEDRICH MIESCHER INSTIT, / CH-4058
BASEL// SWITZERLAND/
Journal: MOLECULAR AND CELLULAR BIOLOGY, 1998, V18, N12 (DEC), P7397-7409
ISSN: 0270-7306 Publication Date: 19981200
Publisher: AMER SOC MICROBIOLOGY, 1325 MASSACHUSETTS AVENUE, NW
WASHINGTON, DC 20005-4171
Language: English Document Type: ARTICLE (ABSTRACT AVAILABLE)

... Abstract: differently in the presence of OBF-1 compared to the POU
domain alone, and using phosphothioate backbone-
modified probes in electrophoretic mobility shift assays, we
identified several positions influencing ternary complex formation, We
...
... Identifiers: CELL-SPECIFIC COACTIVATOR; BINDING TRANSCRIPTION FACTORS;
CCA-B; FUNCTIONAL CHARACTERIZATION; IMMUNOGLOBULIN PROMOTERS;
ACTIVATION DOMAINS; CRYSTAL-STRUCTURE; MURINE HOMOLOG; HOMEODOMAIN;
OCT-1

5/3, K/14 (Item 5 from file: 34)
DI ALOG(R) File 34: Sci Search(R) Cited Ref Sci
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07029568 Genuine Article#: 116JT No. References: 291
Title: Modified oligonucleotides: Synthesis and strategy for users
Author: Verma S (REPRINT); Eckstein F
Corporate Source: MAX PLANCK INST EXPT MED, HERMANN REINSTR 3/D-37075
GOTTINGEN/ GERMANY/ (REPRINT)
Journal: ANNUAL REVIEW OF BIOCHEMISTRY, 1998, V67, P99-134
ISSN: 0066-4154 Publication Date: 19980000
Publisher: ANNUAL REVIEWS INC, 4139 EL CAMINO WAY, PO BOX 10139, PALO ALTO,
CA 94303-0139
Language: English Document Type: REVIEW (ABSTRACT AVAILABLE)

... Abstract: and nucleic acid cross-linking studies.

The automation of oligonucleotide synthesis, the development of
versatile phosphoramidite reagents, and efficient scale-up have
expanded the application of modified oligonucleotides to diverse areas
...

... biological research. Numerous reports have covered oligonucleotides for
which modifications have been made of the phosphodiester
backbone, of the purine and pyrimidine heterocyclic bases, and of the
sugar moiety; these modifications...

... such chemically modified oligonucleotides. Because of space limitations,
we discuss only those oligonucleotides that contain phosphate and
phosphate analogs as internucleotidic linkages.

10789353a.txt

... Descriptors: oligonucleotide analogs ; backbone
modifications ; base modifications ; sugar modifications ;
reporter groups
... Identifiers: LINKING; TRIPLE-HELIX FORMATION; STRAND DISPLACEMENT
AMPLIFICATION; NUCLEOTIDE ANALOG 2-AMINOPURINE; TETRAHYMENA RIBOZYME
REACTION; HUMAN-IMMUNODEFICIENCY-VIRUS

5/3, K/15 (Item 6 from file: 34)
DI ALOG(R) File 34: Sci Search(R) Cited Ref Sci
(c) 2009 The Thomson Corp. All rts. reserv.

05255305 Genuine Article#: VM029 No. References: 183
Title: STRUCTURAL ASPECTS OF NUCLEIC-ACID ANALOGS AND ANTI SENSE
OLIGONUCLEOTIDES
Author: EGLIM
Corporate Source: NORTHWESTERN UNIV, SCH MED, DEPT BIOL CHEM & MOL
PHARMACOL, 303 E CHICAGO AVE/CHICAGO/IL/60611
Journal: ANGEWANDTE CHEMIE-INTERNATIONAL EDITION IN ENGLISH, 1996, V35, N17
(SEP 20), P1895-1910
ISSN: 0570-0833
Language: ENGLISH Document Type: REVIEW

... Identifiers: FORMATION; B-DNA DODECAMER; X-RAY CRYSTAL;
MOLECULAR-STRUCTURE; GENE-EXPRESSION; CONFORMATIONAL FLEXIBILITY;
INTERNUCLEOSIDE LINKAGES; PHOSPHODIESTER LINKAGE; CARBOCYCLIC
THYMIDINE; BACKBONE MODIFICATION
... Research Fronts: ANGSTROM RESOLUTION; REFINED CRYSTAL-STRUCTURE;
KNOWLEDGE-BASED PROTEIN MODELING
94-1702 001 (HAMMERHEAD RIBOZYME; HUMAN-IMMUNODEFICIENCY-VIRUS
TYPE-1 RNASE H-1; INTRACELLULAR ANTI-REV SINGLE-CHAIN ANTIBODY)
94-4790 001...
? ds

Set	Items	Description
S1	345	E3- E7
S2	4	S1 AND BACKBONE
S3	1229	BACKBONE(W MODIF? AND (PHOS? OR ?PHOS?))
S4	175	S3 AND (IMMUNO? OR INHIBIT? OR ?IMMUNO? OR ?SUPPRE? OR ?S- TIMUL?)
S5	113	RD (unique items)
S6	0	S5 AND ?TCGTCGTTTTGTCGTTTTTTTTCGA?

? E AU=KLIMAN, DENNIS?

Ref	Items	Index-term
E1	1	AU=KLIMAN, DENNIS MARC
E2	1	AU=KLIMAN, DENNIS R.
E3	0	*AU=KLIMAN, DENNIS?
E4	117	AU=KLIMAN, DM
E5	20	AU=KLIMAN, DM*
E6	1	AU=KLIMAN, DR
E7	2	AU=KLIMAN, EVA
E8	2	AU=KLIMAN, J.
E9	2	AU=KLIMAN, J. P
E10	23	AU=KLIMAN, J. P.
E11	1	AU=KLIMAN, J. P
E12	30	AU=KLIMAN, J. P.

Enter P or PAGE for more

? S E1- E6

1	AU=KLIMAN, DENNIS MARC
1	AU=KLIMAN, DENNIS R.

0 AU=KLINMAN, DENNIS?
 117 AU=KLINMAN, DM
 20 AU=KLINMAN, DM
 1 AU=KLINMAN, DR
 S1 140 E1-E6
 ? S S1 AND RESPONSE
 140 S1
 13463981 RESPONSE
 S2 69 S1 AND RESPONSE
 ? RD

>>>Duplicate detection is not supported for File 391.

>>>Duplicate detection is not supported for File 393.

>>>Records from unsupported files will be retained in the RD set.

S3 61 RD (unique items)

? T S3/3, K/1-5

>>>KW C option is not available in file(s): 399

3/3, K/1 (Item 1 from file: 24)
 DIALOG(R) File 24: CSA Life Sciences Abstracts
 (c) 2009 CSA. All rights reserved.

0003216277 IP ACCESSION NO: 7870143
 Response of peripheral blood mononuclear cells from lupus patients to
 stimulation by CpG oligodeoxynucleotides

Zeuner, RA; Klinman, DM; Illei, G; Yarboro, C; Ishii, KJ;
 Gursel, M; Verthelyi, D

Rheumatology, v 42, n 4, p 563, April 2003
 PUBLICATION DATE: 2003

PUBLISHER: Oxford University Press, Oxford Journals, Great Clarendon Street

DOCUMENT TYPE: Journal Article

RECORD TYPE: Abstract

LANGUAGE: English

SUMMARY LANGUAGE: English

ISSN: 1462-0324

ELECTRONIC ISSN: 1462-0332

FILE SEGMENT: Immunology Abstracts

Response of peripheral blood mononuclear cells from lupus patients to
 stimulation by CpG oligodeoxynucleotides

Zeuner, RA; Klinman, DM; Illei, G; Yarboro, C; Ishii, KJ;
 Gursel, M; Verthelyi, D

ABSTRACT:

... to the initiation and/or perpetuation of the disease. This study characterizes the in vitro response of peripheral blood mononuclear cells (PBMC) from SLE patients to CpG DNA. Methods. Secretion of...

...co-stimulatory molecules and the secretion of interferon-[alpha] and interleukin-6 (IL-6) in response to CpG ODN was significantly reduced in monocytes and dendritic cells from SLE patients. Secretion...

...by natural killer (NK) cells was also reduced. In contrast, the IgM and IL-10 response of B cells to CpG ODN was normal. Conclusion. Monocytes, dendritic cells and NK cells...

3/3, K/2 (Item 2 from file: 24)
DIALOG(R) File 24: CSA Life Sciences Abstracts
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0002811614 IP ACCESSION NO: 6687903
Prime-boost vaccination with plasmid DNA and a chimeric adenovirus type 5 vector with type 35 fiber induces protective immunity against HIV

Xin, K-Q; Jounai, N; Someya, K; Honma, K; Mizuguchi, H; Naganawa, S; Kitamura, K; Hayakawa, T; Saha, S; Takeshita, F; Okuda, K; Honda, M; Klinman, DM; Okuda, K
Department of Molecular Biodefense Research, Yokohama City University, Graduate School of Medicine, 3-9 Fukuura, Kanazawa-ku, Yokohama 236-0004, Japan

Gene Therapy, v 12, n 24, p 1769-1777, December 2005
PUBLICATION DATE: 2005

DOCUMENT TYPE: Journal Article
RECORD TYPE: Abstract
LANGUAGE: English
SUMMARY LANGUAGE: English
ISSN: 0969-7128
FILE SEGMENT: Nucleic Acids Abstracts; Medical & Pharmaceutical Biotechnology Abstracts
...H; Naganawa, S; Kitamura, K; Hayakawa, T; Saha, S; Takeshita, F; Okuda, K; Honda, M; Klinman, DM; Okuda, K

ABSTRACT:
... DNA vaccine prime followed by an adenovirus type 5 (Add) boost elicited a protective immune response against SHIV challenge in monkeys. However, the hepatocellular tropism of Ad5 limits the safety of...

DESCRIPTORS: DNA vaccines; Immunity; Fibers; Immunogenicity; Vaccines; Animal models; Plasmids; hepatotoxicity; Expression vectors; Immune response; Tropism; Gene therapy; Vaccination; Human immunodeficiency virus; Adenovirus; Vaccinia virus; Macaca mulatta
...SUBJ CATG: RNA/DNA role in infection & immune response; 33345...

3/3, K/3 (Item 3 from file: 24)
DIALOG(R) File 24: CSA Life Sciences Abstracts
(c) 2009 CSA. All rights reserved.

0002744578 IP ACCESSION NO: 6446091
In ovo administration of QpG oligodeoxynucleotides and the recombinant microneme protein MC2 protects against Eimeria infections

Dalloul, RA; Lillehoj, HS; Klinman, DM; Ding, X; Mn, W; Heckert, RA; Lillehoj, EP
Animal Parasitic Diseases Laboratory, Animal and Natural Resources Institute, BARC-East, Building 1040, ARS, USDA, Beltsville, MD 20705, USA, [mailto:hlillehoj@anri.barc.usda.gov]

Vaccine, v 23, n 24, p 3108-3113, May 2005
PUBLICATION DATE: 2005

PUBLISHER: Butterworth-Heinemann, 313 Washington St. Newton MA 02158 USA

DOCUMENT TYPE: Journal Article

RECORD TYPE: Abstract
LANGUAGE: English
SUMMARY LANGUAGE: English
ISSN: 0264-410X
FILE SEGMENT: Immunology Abstracts; Al g o l o g y, M y c o l o g y & P r o t o z o o l o g y
Abstracts (M c r o b i o l o g y C)

Dalloul, RA; Lillehoj, HS; Klinman, DM; Ding, X; Mn, W
Heckert, RA; Lillehoj, EP

ABSTRACT:

... effect in reducing the oocyst output; however, it resulted in the highest and lowest Ab response before and after *Eimeria tenella* infection, respectively. Collectively, QpG ODNs administered in ovo demonstrated immunoenhancing...

DESCRIPTORS: QpG islands; Oocysts; Infection; Micronemes;
Digonucleotides; M2 protein; Cocci di osi s; Vaccines; Adjuvants;
Antibody response; Vaccination; *Eimeria tenella*; *Eimeria*
acerulina; *Eimeria*

3/3, K/4 (Item 4 from file: 24)
DIALOG(R) File 24: CSA Life Sciences Abstracts
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0002611365 IP ACCESSION NO: 5978586
QpG oligonucleotides improve the protective immune response induced
by the anthrax vaccination of rhesus macaques

Klinman, DM; Xie, H; Little, SF; Currie, D; Ivins, BE
Section of Retroviral Immunology, Center for Biologics Evaluation and
Research, Food and Drug Administration, Bldg. 29A, Rm 3 D 10, Bethesda, MD
20892, USA, [mailto:klinman@ber.fda.gov]

Vaccine, v 22, n 21-22, p 2881-2886, July 2004
PUBLICATION DATE: 2004

PUBLISHER: Butterworth-Heinemann, 313 Washington St. Newton MA 02158 USA

DOCUMENT TYPE: Journal Article
RECORD TYPE: Abstract
LANGUAGE: English
SUMMARY LANGUAGE: English
ISSN: 0264-410X
FILE SEGMENT: Immunology Abstracts; Medical & Pharmaceutical Biotechnology
Abstracts; Bacteriology Abstracts (M c r o b i o l o g y B)
QpG oligonucleotides improve the protective immune response induced
by the anthrax vaccination of rhesus macaques

Klinman, DM; Xie, H; Little, SF; Currie, D; Ivins, BE

ABSTRACT:

Synthetic oligodeoxynucleotides (ODN) containing unmethylated QpG motifs act as immune adjuvants, improving the immune response elicited by co-administered vaccines. Combining QpG ODN with anthrax vaccine adsorbed (AVA, the licensed human vaccine) increased the speed, magnitude and avidity of the resultant anti-anthrax response. The protective activity of these Abs was established by passive transfer to anthrax-challenged mice. The ability of QpG ODN to accelerate and magnify the immune response to AVA suggests this strategy may contribute to

the development of prophylactic and therapeutic vaccines...

3/3, K/5 (Item 5 from file: 24)
 DIALOG(R) File 24: CSA Life Sciences Abstracts
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0002609687 IP ACCESSION NO: 5897883
 Signal transduction pathways mediated by the interaction of CpG DNA with
 Toll-like receptor 9

Takeshita, F; Gursel, I; Ishii, KJ; Suzuki, K; Gursel, M; Klinman,
 DM*
 CBER/ FDA, Bldg 29A, Rm 3D10, Bethesda, MD 20892, USA,
 [mailto:Klinman@cber.fda.gov]

Seminars in Immunology, v 16, n 1, p 17-22, February 2004
 PUBLICATION DATE: 2004

PUBLISHER: Elsevier Ltd

DOCUMENT TYPE: Journal Article

RECORD TYPE: Abstract

LANGUAGE: English

SUMMARY LANGUAGE: English

ISSN: 1044-5323

FILE SEGMENT: Immunology Abstracts

Takeshita, F; Gursel, I; Ishii, KJ; Suzuki, K; Gursel, M; Klinman,
 DM*

ABSTRACT:

... DNA is recognized as a pathogen-associated molecular pattern, and
 triggers a rapid innate immune response. CpG ODN are being harnessed
 for a variety of therapeutic uses, including as immune adjuvants...
 ? E AU=KRI EG, ARTH?

Ref	Items	Index-term
E1	1	AU=KRI EG, ANJA
E2	1	AU=KRI EG, ARI BERT
E3	0	*AU=KRI EG, ARTH?
E4	7	AU=KRI EG, ARTHUR
E5	1	AU=KRI EG, ARTHUR F
E6	11	AU=KRI EG, ARTHUR F.
E7	67	AU=KRI EG, ARTHUR M
E8	249	AU=KRI EG, ARTHUR M
E9	2	AU=KRI EG, B
E10	240	AU=KRI EG, B.
E11	4	AU=KRI EG, B. L.
E12	2	AU=KRI EG, B. L.

Enter P or PAGE for more

? S E1-E8

1	AU=KRI EG, ANJA
1	AU=KRI EG, ARI BERT
0	AU=KRI EG, ARTH?
7	AU=KRI EG, ARTHUR
1	AU=KRI EG, ARTHUR F
11	AU=KRI EG, ARTHUR F.
67	AU=KRI EG, ARTHUR M
249	AU=KRI EG, ARTHUR M

S4 337 E1-E8

? S S4 AND RESPONSE

337 S4
13463981 RESPONSE
S5 67 S4 AND RESPONSE
? RD

>>>Duplicate detection is not supported for File 391.

>>>Duplicate detection is not supported for File 393.

>>>Records from unsupported files will be retained in the RD set.

S6 59 RD (unique items)
? S S6 AND INTERFERON

59 S6
1197509 INTERFERON
S7 16 S6 AND INTERFERON
? RD

>>>Duplicate detection is not supported for File 391.

>>>Duplicate detection is not supported for File 393.

>>>Records from unsupported files will be retained in the RD set.

S8 16 RD (unique items)
? T S8/3, K/16
>>>KW C option is not available in file(s): 399

8/3, K/16 (Item 7 from file: 399)
DI ALOG(R) File 399: CA SEARCH(R)
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124115228 CA: 124(9)115228b JOURNAL
IFN- γ promotes IL-6 and IgM secretion in response to CpG motifs in
bacterial DNA and oligodeoxynucleotides
AUTHOR(S): Yi, Ae-Kyung; Chace, Jacqueline H.; Cowdery, John S.; Krieg,
Arthur M
LOCATION: Dep. Internal Med., Univ. Iowa Coll. Med., Iowa City, IA, 52242
, USA
JOURNAL: J. Immunol. DATE: 1996 VOLUME: 156 NUMBER: 2 PAGES: 558-64
CODEN: JOIM3 ISSN: 0022-1767 LANGUAGE: English
? E AU=STEINBERG, ALFRED?

Ref	Items	Index-term
E1	154	AU=STEINBERG, ALFRED D.
E2	2	AU=STEINBERG, ALFRED P.
E3	0	*AU=STEINBERG, ALFRED?
E4	1	AU=STEINBERG, ALLEN ROBERT
E5	3	AU=STEINBERG, ALLISON
E6	1	AU=STEINBERG, ALLYNA B.
E7	1	AU=STEINBERG, ALMA
E8	1	AU=STEINBERG, ALMA G
E9	4	AU=STEINBERG, ALODIE
E10	3	AU=STEINBERG, ALODIE G
E11	3	AU=STEINBERG, ALODIE G
E12	1	AU=STEINBERG, ALVIN

Enter P or PAGE for more

? S E1-E3
154 AU=STEINBERG, ALFRED D.
2 AU=STEINBERG, ALFRED P.
0 AU=STEINBERG, ALFRED?
S9 156 E1-E3
? S S9 AND INTERFERON
156 S9

1197509 INTERFERON
 S10 3 S9 AND INTERFERON
 ? T S10/3, K/1-3
 >>>KW C option is not available in file(s): 399

10/3, K/1 (Item 1 from file: 399)
 DI ALOG(R) File 399: CA SEARCH(R)
 (c) 2009 American Chemical Society. All rts. reserv.

113209578 CA: 113(23)209578r JOURNAL
 Anti-CD3 antibody induces rapid expression of cytokine genes in vivo
 AUTHOR(S): Scott, Dorothy E.; Gause, William C.; Finkelman, Fred D.;
 Steinberg, Alfred D.
 LOCATION: Arthritis Rheum Branch, Natl. Inst. Arthritis Musculoskeletal
 Skin Dis., Bethesda, MD, 20892, USA
 JOURNAL: J. Immunol. DATE: 1990 VOLUME: 145 NUMBER: 7 PAGES: 2183-8
 CODEN: JOI MA3 ISSN: 0022-1767 LANGUAGE: English

10/3, K/2 (Item 2 from file: 399)
 DI ALOG(R) File 399: CA SEARCH(R)
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99051670 CA: 99(7)51670v JOURNAL
 The cellular basis for immune interferon production in autoimmune
 MRL-lpr/lpr mice
 AUTHOR(S): Santoro, Thomas J.; Benjamin, William R.; Oppenheim, Joost J.;
 Steinberg, Alfred D.
 LOCATION: Arthritis Rheum Branch, Natl. Inst. Arthritis, Diabet. Digest.
 Kidney Dis., Bethesda, MD, 20205, USA
 JOURNAL: J. Immunol. DATE: 1983 VOLUME: 131 NUMBER: 1 PAGES: 265-8
 CODEN: JOI MA3 ISSN: 0022-1767 LANGUAGE: English

10/3, K/3 (Item 3 from file: 399)
 DI ALOG(R) File 399: CA SEARCH(R)
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74074908 CA: 74(15)74908b JOURNAL
 Pathogenesis of autoimmunity in New Zealand mice. II. Acceleration of
 glomerulonephritis by polyinosinic polycytidylic acid
 AUTHOR(S): Carpenter, D. F.; Steinberg, Alfred D.; Schur, Peter H.;
 Talal, Norman
 LOCATION: Div. Biol. Stand., Natl. Inst. Health, Bethesda, Md.
 JOURNAL: Lab. Invest. DATE: 1970 VOLUME: 23 NUMBER: 6 PAGES: 628-34
 CODEN: LAI NAW LANGUAGE: English

Set Items Description

 ? e au=krieg, ar?

Ref	Items	Index-term
E1	1	AU=KRI EG ANDREAS H.
E2	1	AU=KRI EG ANJA
E3	0	*AU=KRI EG AR?
E4	1	AU=KRI EG ARI BERT
E5	7	AU=KRI EG ARTHUR
E6	1	AU=KRI EG ARTHUR F
E7	11	AU=KRI EG ARTHUR F.
E8	64	AU=KRI EG ARTHUR M
E9	251	AU=KRI EG ARTHUR M
E10	2	AU=KRI EG B

E11 249 AU=KRI EG B.
E12 4 AU=KRI EG B. L.

Enter P or PAGE for more

? s e1-e12

1 AU=KRI EG ANDREAS H.
1 AU=KRI EG ANJA
0 AU=KRI EG AR?
1 AU=KRI EG ARI BERT
7 AU=KRI EG ARTHUR
1 AU=KRI EG ARTHUR F
11 AU=KRI EG ARTHUR F.
64 AU=KRI EG ARTHUR M
251 AU=KRI EG ARTHUR M
2 AU=KRI EG B
249 AU=KRI EG B.
4 AU=KRI EG B. L.

S1 592 E1-E12

? s s1 and tcgtcgttttgacgttttgcgtt

592 S1
2 TCGTCGTTTTGACGTTTTGTCGTT

S2 0 S1 AND TCGTCGTTTTGACGTTTTGTCGTT

? s s1 and phosphodiester

592 S1
37178 PHOSPHODI ESTER

S3 13 S1 AND PHOSPHODI ESTER

? rd

>>>Duplicate detection is not supported for File 393.

>>>Duplicate detection is not supported for File 391.

>>>Records from unsupported files will be retained in the RD set.

S4 11 RD (unique items)

? t s4/3, k/1-11

>>>KW C option is not available in file(s): 399

4/3, K/1 (Item 1 from file: 98)
DIALOG(R) File 98: General Sci Abs
(c) 2009 The H W Wilson Co. All rts. reserv.

02515609 H. W WILSON RECORD NUMBER: BGS1 93015609
Modification of antisense phosphodiester oligodeoxynucleotides by a
5' cholesteryl moiety increases cellular association and improves
efficacy.

Krieg, Arthur M

Tonkinson, John; Matson, Sara

Proceedings of the National Academy of Sciences of the United States of
America (Proc Natl Acad Sci U S A) v. 90 (Feb. 1 '93) p. 1048-52

SPECIAL FEATURES: bibli ISSN: 0027-8424

LANGUAGE: English

COUNTRY OF PUBLICATION: United States

Modification of antisense phosphodiester oligodeoxynucleotides by a
5' cholesteryl moiety increases cellular association and improves
efficacy.

Krieg, Arthur M

4/3, K/2 (Item 1 from file: 399)
DIALOG(R) File 399: CA SEARCH(R)
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150258230 CA: 150(13)258230u PATENT

Combination motif immune stimulatory oligonucleotides with improved activity

INVENTOR(AUTHOR): Uhlmann, Eugen; Krieg, Arthur M.; Hanson, Douglas Charles; Samulowitz, Ulrike

LOCATION: USA

ASSIGNEE: Pfizer Inc.; Coley Pharmaceutical Group, Inc.; Coley Pharmaceutical GmbH

PATENT: PCT International ; WO 200922215 A1 DATE: 20090219

APPLICATION: WO 20081B2102 (20080805) *US 2007PV964477 (20070813)

PAGES: 73pp. CODEN: PIXXD2 LANGUAGE: English

PATENT CLASSIFICATIONS:

IPC/8 + Level Value Position Status Version Action Source Office:

A61K-0031/7088 A I F B 20060101 H EP

C12N-0015/11 A I L B 20060101 H EP

DESIGNATED COUNTRIES: AE; AG; AL; AM; AO; AT; AU; AZ; BA; BB; BG; BH; BR; BW; BY; BZ; CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DO; DZ; EC; EE; EG; ES; FI; GB; GD; GE; GH; GM; GT; HN; HR; HU; ID; IL; IN; IS; JP; KE; KG; KM; KN; KP; KR; KZ; LA; LC; LK; LR; LS; LT; LU; LY; MA; MD; ME; MG; MK; MN; MW; MX; MY; MZ; NA; NG; NI; NO; NZ; OM; PG; PH; PL; PT; RO; RU; SC; SD; SE; SG; SK; SL; SM; ST; SV; SY; TJ; TM; TN; TR

DESIGNATED REGIONAL: AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HR; HU; IE; IS; IT; LT; LU; LV; MC; MT; NL; NO; PL; PT; RO; SE; SI; SK; TR; BF; BJ; CF; CG; CI; CM; GA; GN; GQ; GW; ML; MR; NE; SN; TD; TG; BW; GH; GM; KE; LS; MW; MZ; NA; SD; SL; SZ; TZ; UG; ZM; ZW; AM; AZ; BY; KG; KZ; MD; RU; TJ; TM

4/3, K/3 (Item 2 from file: 399)

DI ALOG(R) File 399: CA SEARCH(R)

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145291047 CA: 145(15)291047j PATENT

Immunostimulatory oligonucleotides with stabilized internucleotide linkage for treating cancer, allergy, asthma and infection

INVENTOR(AUTHOR): Krieg, Arthur M.; Samulowitz, Ulrike; Vollmer, Joerg

LOCATION: USA

ASSIGNEE: Coley Pharmaceutical Group, Inc.; Coley Pharmaceutical GmbH

PATENT: PCT International ; WO 200691915 A2 DATE: 20060831

APPLICATION: WO 2006US6778 (20060224) *US 2005PV655931 (20050224)

PAGES: 93pp. CODEN: PIXXD2 LANGUAGE: English

PATENT CLASSIFICATIONS:

CLASS: A61K-000/A

DESIGNATED COUNTRIES: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BW; BY; BZ; CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DZ; EC; EE; EG; ES; FI; GB; GD; GE; GH; GM; HR; HU; ID; IL; IN; IS; JP; KE; KG; KM; KN; KP; KR; KZ; LC; LK; LR; LS; LT; LU; LV; LY; MA; MD; ME; MG; MK; MN; MW; MX; MZ; NA; NG; NI; NO; NZ; OM; PG; PH; PL; PT; RO; RU; SC; SD; SE; SG; SK; SL; SM; SY; TJ; TM; TN; TR; TT; TZ; UA; UG; US; UZ; VC; VN; YU; ZA

DESIGNATED REGIONAL: AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HU; IE; IS; IT; LT; LU; LV; MC; NL; PL; PT; RO; SE; SI; SK; TR; BF; BJ; CF; CG; CI; CM; GA; GN; GQ; GW; ML; MR; NE; SN; TD; TG; BW; GH; GM; KE; LS; MW; MZ; NA; SD; SL; SZ; TZ; UG; ZM; ZW; AM; AZ; BY; KG; KZ; MD; RU; TJ; TM

4/3, K/4 (Item 3 from file: 399)

DI ALOG(R) File 399: CA SEARCH(R)

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142462266 CA: 142(25)462266z PATENT

QpG immunostimulatory nucleic acids and oligonucleotide analogs for enhancing immune response of vaccines against infection, allergy and cancer

INVENTOR(AUTHOR): Uhlmann, Eugen; Vollmer, Joerg; Krieg, Arthur M.; Noll,

Bernhard O.

LOCATION: Germany,

ASSIGNEE: Coley Pharmaceutical GmbH; Coley Pharmaceutical Group, Inc.

PATENT: PCT International ; WO 200542018 A2 DATE: 20050512

APPLICATION: WO 2004US36240 (20041029) *US 2003PV516193 (20031030)

PAGES: 113 pp. CODEN: P1XXD2 LANGUAGE: English

PATENT CLASSIFICATIONS:

CLASS: A61K-039/39A; A61P-031/00B; A61P-037/08B; A61P-035/00B

DESIGNATED COUNTRIES: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BW; BY;
 BZ; CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DZ; EC; EE; EG; ES; FI; GB; GD;
 GE; GH; GM; HR; HU; ID; IL; IN; IS; JP; KE; KG; KP; KR; KZ; LC; LK; LR; LS;
 LT; LU; LV; MA; MD; MG; MK; MN; MW; MX; MZ; NA; NI; NO; NZ; OM; PG; PH; PL;
 PT; RO; RU; SC; SD; SE; SG; SK; SL; SY; TJ; TM; TN; TR; TT; TZ; UA; UG; US;
 UZ; VC; VN; YU; ZA; ZM; ZW DESIGNATED REGIONAL: BW; GH; GM; KE; LS; MW; MZ;
 ; NA; SD; SL; SZ; TZ; UG; ZM; ZW AM; AZ; BY; KG; KZ; MD; RU; TJ; TM; AT;
 BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HU; IE; IT; LU; MC; NL;
 PL; PT; RO; SE; SI; SK; TR; BF; BJ; CF; CG; CI; CM; GA; GN; GQ; GW; ML; MR;
 NE; SN; TD; TG

4/3, K/5 (Item 4 from file: 399)

DI ALOG(R) File 399: CA SEARCH(R)

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142372464 CA: 142(20)372464h PATENT

Compositions comprising immunostimulatory nucleic acid-lipophilic
 conjugates and antigen or therapeutic agent for treating allergy, cancer,
 infection and autoimmune disease

INVENTOR(AUTHOR): Vollmer, Joerg; Krieg, Arthur M; Uhlmann, Eugen

LOCATION: USA

ASSIGNEE: Coley Pharmaceutical Group, Inc.; Coley Pharmaceutical GmbH

PATENT: PCT International ; WO 200530259 A2 DATE: 20050407

APPLICATION: WO 2004US31748 (20040927) *US 2003PV505977 (20030925)

PAGES: 120 pp. CODEN: P1XXD2 LANGUAGE: English

PATENT CLASSIFICATIONS:

CLASS: A61K-047/48A

DESIGNATED COUNTRIES: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BW; BY;
 BZ; CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DZ; EC; EE; EG; ES; FI; GB; GD;
 GE; GH; GM; HR; HU; ID; IL; IN; IS; JP; KE; KG; KP; KR; KZ; LC; LK; LR; LS;
 LT; LU; LV; MA; MD; MG; MK; MN; MW; MX; MZ; NA; NI; NO; NZ; OM; PG; PH; PL;
 PT; RO; RU; SC; SD; SE; SG; SK; SL; SY; TJ; TM; TN; TR; TT; TZ; UA; UG; US;
 UZ; VC; VN; YU; ZA; ZM; ZW DESIGNATED REGIONAL: BW; GH; GM; KE; LS; MW; MZ;
 ; NA; SD; SL; SZ; TZ; UG; ZM; ZW AM; AZ; BY; KG; KZ; MD; RU; TJ; TM; AT;
 BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HU; IE; IT; LU; MC; NL;
 PL; PT; RO; SE; SI; SK; TR; BF; BJ; CF; CG; CI; CM; GA; GN; GQ; GW; ML; MR;
 NE; SN; TD; TG

4/3, K/6 (Item 5 from file: 399)

DI ALOG(R) File 399: CA SEARCH(R)

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140230578 CA: 140(15)230578h PATENT

Sequences of immunostimulatory oligonucleotides and therapeutic use for
 immune related diseases

INVENTOR(AUTHOR): Krieg, Arthur M; Samulowitz, Ulrike; Vollmer, Joerg;
 Uhlmann, Eugen; Jurk, Marion; Lipford, Grayson; Rankin, Robert

LOCATION: USA

ASSIGNEE: Coley Pharmaceutical Group, Inc.; Coley Pharmaceutical GmbH

PATENT: PCT International ; WO 200416805 A2 DATE: 20040226

APPLICATION: WO 2003US25935 (20030819) *US PV404479 (20020819) *US
 PV404820 (20020819) *US PV429701 (20021127) *US PV447377 (20030214)

PAGES: 276 pp. CODEN: P1XXD2 LANGUAGE: English

PATENT CLASSIFICATIONS:

CLASS: C12Q 000/ A

DESIGNATED COUNTRIES: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BY; BZ; CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DZ; EC; EE; ES; FI; GB; GD; GE; GH; GM; HR; HU; ID; IL; IN; IS; JP; KE; KG; KP; KR; KZ; LC; LK; LR; LS; LT; LU; LV; MA; MD; MG; MK; MN; MW; MX; MZ; NI; NO; NZ; OM; PG; PH; PL; PT; RO; RU; SC; SD; SE; SG; SK; SL; SY; TJ; TM; TN; TR; TT; TZ; UA; UG; UZ; VC; VN; YU; ZA; ZW AM; AZ; BY; KG; KZ; MD; RU; TJ; TM DESIGNATED REGIONAL: GH; GM; KE; LS; MW; MZ; SD; SL; SZ; TZ; UG; ZM; ZW AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HU; IE; IT; LU; MC; NL; PT; RO; SE; SI; SK; TR; BF; BJ; CF; CG; CI; CM; GA; GN; GQ; GW; ML; MR; NE; SN; TD; TG

4/3, K/7 (Item 6 from file: 399)

DIALOG(R) File 399: CA SEARCH(R)

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138203655 CA: 138(14) 203655h PATENT

Oligonucleotides containing stimulatory phosphorothioate motif and neutralizing motif for treating infections, allergies and cancers

INVENTOR(AUTHOR): Krieg, Arthur M; Vollmer, Jorg; Uhlman, Eugen

LOCATION: USA

ASSIGNEE: Coley Pharmaceutical Group, Inc.; Coley Pharmaceutical GmbH; University of Iowa Research Foundation

PATENT: PCT International; WO 200315711 A2 DATE: 20030227

APPLICATION: WO 2002US26468 (20020819) *US PV313273 (20010817) *US PV393952 (20020703)

PAGES: 115 pp. CODEN: PIXXD2 LANGUAGE: English

PATENT CLASSIFICATIONS:

CLASS: A61K 000/ A

DESIGNATED COUNTRIES: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BY; BZ; CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DZ; EC; EE; ES; FI; GB; GD; GE; GH; GM; HR; HU; ID; IL; IN; IS; JP; KE; KG; KP; KR; KZ; LC; LK; LR; LS; LT; LU; LV; MA; MD; MG; MK; MN; MW; MX; MZ; NO; NZ; OM; PH; PL; PT; RO; RU; SD; SE; SG; SI; SK; SL; TJ; TM; TN; TR; TT; TZ; UA; UG; UZ; VN; YU; ZA; ZW AM; AZ; BY; KG; KZ; MD; RU; TJ; TM DESIGNATED REGIONAL: GH; GM; KE; LS; MW; MZ; SD; SL; SZ; TZ; UG; ZM; ZW AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; IE; IT; LU; MC; NL; PT; SE; SK; TR; BF; BJ; CF; CG; CI; CM; GA; GN; GQ; GW; ML; MR; NE; SN; TD; TG

4/3, K/8 (Item 7 from file: 399)

DIALOG(R) File 399: CA SEARCH(R)

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135018544 CA: 135(2) 18544w PATENT

Immunostimulatory nucleic acid molecules

INVENTOR(AUTHOR): Krieg, Arthur M; Kline, Joel N.

LOCATION: USA

ASSIGNEE: University of Iowa Research Foundation; Coley Pharmaceutical Group, Inc.; United States Dept. of Health and Human Services

PATENT: United States; US 6239116 B1 DATE: 20010529

APPLICATION: US 960774 (19971030) *US 738652 (19961030)

PAGES: 74 pp., Cont.-in-part of U.S. Ser. No. 738,652. CODEN: USXXAM

LANGUAGE: English

PATENT CLASSIFICATIONS:

CLASS: 514044000; A61P-037/06A

4/3, K/9 (Item 8 from file: 399)

DIALOG(R) File 399: CA SEARCH(R)

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10789353a.txt

133349133 CA: 133(25)349133e

PATENT

Screening for immunostimulatory DNA functional modifiers

INVENTOR(AUTHOR): Noll, Bernhard O.; Schetter, Christian; Krieg, Arthur M

LOCATION: Germany,

ASSIGNEE: CPG Immunopharmaceuticals Gmb.H.; University of Iowa Research Foundation

PATENT: PCT International ; WO 200067023 A1 DATE: 20001109

APPLICATION: WO 2000US11697 (20000428) *US PV131830 (19990429) *US PV186845 (20000303)

PAGES: 95 pp. CODEN: PIXXD2 LANGUAGE: English

PATENT CLASSIFICATIONS:

CLASS: G01N-033/50A; G01N-033/68B; C12Q-001/68B; C07K-014/47B

DESIGNATED COUNTRIES: AE; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BY; CA; CH; CN; CR; CU; CZ; DE; DK; DM; DZ; EE; ES; FI; GB; GD; GE; GH; GM; HR; HU; ID; IL; IN; IS; JP; KE; KG; KP; KR; KZ; LC; LK; LR; LS; LT; LU; LV; MA; MD; MG; MK; MN; MW; MX; NO; NZ; PL; PT; RO; RU; SD; SE; SG; SI; SK; SL; TJ; TM; TR; TT; TZ; UA; UG; UZ; VN; YU; ZA; ZW; AM; AZ; BY; KG; KZ; MD; RU; TJ; TM

DESIGNATED REGIONAL: GH; GM; KE; LS; MW; SD; SL; SZ; TZ; UG; ZW; AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LU; MC; NL; PT; SE; BF; BJ; CF; CG; CI; CM; GA; GN; GW; ML; MR; NE; SN; TD; TG

4/3, K/10 (Item 9 from file: 399)

DIALOG(R) File 399: CA SEARCH(R)

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123274918 CA: 123(21)274918x CONFERENCE PROCEEDING

Uptake and localization of phosphodiester and chimeric oligodeoxynucleotides in normal and leukemic primary cells

AUTHOR(S): Krieg, Arthur M

LOCATION: Department Internal Medicine, University Iowa, Iowa, IA, USA

JOURNAL: Delivery Strategies Antisense Oligonucleotide Ther. EDITOR: Akhtar, Saghir (Ed), DATE: 1995 PAGES: 177-90 CODEN: 61RXAX LANGUAGE: English PUBLISHER: CRC, Boca Raton, FLA

4/3, K/11 (Item 10 from file: 399)

DIALOG(R) File 399: CA SEARCH(R)

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119173523 CA: 119(17)173523b JOURNAL

Comparison of cellular binding and uptake of antisense phosphodiester, phosphorothioate, and mixed phosphorothioate and methyl phosphonate oligonucleotides

AUTHOR(S): Zhao, Quyan; Matson, Sara; Herrera, Charles J.; Fisher, Eric; Yu, Hong; Krieg, Arthur M

LOCATION: Coll. Med., Univ. Iowa, Iowa City, IA, USA

JOURNAL: Antisense Res. Dev. DATE: 1993 VOLUME: 3 NUMBER: 1 PAGES: 53-66 CODEN: AREDEI ISSN: 1050-5261 LANGUAGE: English ? ds

Set	Items	Description
S1	592	E1-E12
S2	0	S1 AND TCGTCGTTTTGACGTTTTGTCGTT
S3	13	S1 AND PHOSPHODIESTER
S4	11	RD (unique items)

? e au=samulowitz, urike?

Ref	Items	Index-term
E1	4	AU=SAMJLOW TZ, U
E2	25	AU=SAMJLOW TZ, ULRI KE
E3	0	*AU=SAMJLOW TZ, URI KE?
E4	1	AU=SAMJLOWSKA, BARBARA

E5 2 AU=SAMJLOWSKI, W
 E6 1 AU=SAMJLS S
 E7 1 AU=SAMJLSEN, DM
 E8 3 AU=SAMJLSKA EWA
 E9 2 AU=SAMJLSKA H
 E10 2 AU=SAMJLSKA H M
 E11 2 AU=SAMJLSKA HANNA
 E12 2 AU=SAMJLSKA J

Enter P or PAGE for more
 ? e au=samulowitz, ulrik?

Ref	Items	Index-term
E1	1	AU=SAMJLOW TZ, M CHAEL
E2	4	AU=SAMJLOW TZ, U
E3	0	*AU=SAMJLOW TZ, ULRI K?
E4	25	AU=SAMJLOW TZ, ULRI KE
E5	1	AU=SAMJLOWSKA, BARBARA
E6	2	AU=SAMJLOWSKI, W
E7	1	AU=SAMJLS S
E8	1	AU=SAMJLSEN, DM
E9	3	AU=SAMJLSKA EWA
E10	2	AU=SAMJLSKA H
E11	2	AU=SAMJLSKA H M
E12	2	AU=SAMJLSKA HANNA

Enter P or PAGE for more
 ?
 ? s e4
 S5 25 AU=' SAMJLOW TZ, ULRI KE'
 ? s s5 and phosphodi ester
 25 S5
 37178 PHOSPHODI ESTER
 S6 3 S5 AND PHOSPHODI ESTER
 ? rd

>>>Duplicate detection is not supported for File 393.

>>>Duplicate detection is not supported for File 391.

>>>Records from unsupported files will be retained in the RD set.

S7 3 RD (unique items)

? t s7/3, k/1-3

>>>KW C option is not available in file(s): 399

7/3, K/1 (Item 1 from file: 399)

DI ALOG(R) File 399: CA SEARCH(R)

(c) 2009 American Chemical Society. All rts. reserv.

150258230 CA: 150(13)258230u PATENT
 Combination motif immune stimulatory oligonucleotides with improved activity

INVENTOR(AUTHOR): Uhlmann, Eugen; Krieg, Arthur M; Hanson, Douglas Charles; Samulowitz, Ulrike

LOCATION: USA

ASSIGNEE: Pfizer Inc.; Colley Pharmaceutical Group, Inc.; Colley Pharmaceutical GmbH.

PATENT: PCT International ; WO 200922215 A1 DATE: 20090219

APPLICATION: WO 20081B2102 (20080805) *US 2007PV964477 (20070813)

PAGES: 73pp. CODEN: PIXXD2 LANGUAGE: English

PATENT CLASSIFICATIONS:

IPC/8 + Level Value Position Status Version Action Source Office:

A61K-0031/7088 A I F B 20060101 H EP

10789353a.txt
 C12N-0015/11 A I L B 20060101 H EP
 DESI GNATED COUNTRIES: AE; AG; AL; AM; AO; AT; AU; AZ; BA; BB; BG; BH; BR; BW; BY; BZ; CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DO; DZ; EC; EE; EG; ES; FI; GB; GD; GE; GH; GM; GT; HN; HR; HU; ID; IL; IN; IS; JP; KE; KG; KM; KN; KP; KR; KZ; LA; LC; LK; LR; LS; LT; LU; LY; MA; MD; ME; MG; MK; MN; MW; MX; MY; MZ; NA; NG; NI; NO; NZ; OM; PG; PH; PL; PT; RO; RS; RU; SC; SD; SE; SG; SK; SL; SM; ST; SV; SY; TJ; TM; TN; TR DESI GNATED REGIONAL: AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HU; IE; IS; IT; LT; LU; LV; MC; MT; NL; NO; PL; PT; RO; SE; SI; SK; TR; BF; BJ; CF; CG; CI; CM; GA; GN; GQ; GW; ML; MR; NE; SN; TD; TG; BW; GH; GM; KE; LS; MW; MZ; NA; SD; SL; SZ; TZ; UG; ZM; ZW; AM; AZ; BY; KG; KZ; MD; RU; TJ; TM

7/3, K/2 (Item 2 from file: 399)
 DI ALOG(R) File 399: CA SEARCH(R)
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145291047 CA: 145(15)291047j PATENT
 Immunostimulatory oligonucleotides with stabilized internucleotide linkage for treating cancer, allergy, asthma and infection
 INVENTOR(AUTHOR): Krieg, Arthur M; Samulowitz, Ulrike; Vollmer, Joerg
 LOCATION: USA
 ASSIGNEE: Colley Pharmaceutical Group, Inc.; Colley Pharmaceutical GmbH
 PATENT: PCT International ; WO 200691915 A2 DATE: 20060831
 APPLICATION: WO 2006US6778 (20060224) *US 2005PV655931 (20050224)
 PAGES: 93pp. CODEN: PIXXD2 LANGUAGE: English
 PATENT CLASSIFICATIONS:
 CLASS: A61K-000/A
 DESI GNATED COUNTRIES: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BW; BY; BZ; CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DZ; EC; EE; EG; ES; FI; GB; GD; GE; GH; GM; HR; HU; ID; IL; IN; IS; JP; KE; KG; KM; KN; KP; KR; KZ; LC; LK; LR; LS; LT; LU; LV; LY; MA; MD; MG; MK; MN; MW; MX; MZ; NA; NG; NI; NO; NZ; OM; PG; PH; PL; PT; RO; RU; SC; SD; SE; SG; SK; SL; SM; SY; TJ; TM; TN; TR; TT; TZ; UA; UG; US; UZ; VC; VN; YU; ZA DESI GNATED REGIONAL: AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HU; IE; IS; IT; LT; LU; LV; MC; NL; PL; PT; RO; SE; SI; SK; TR; BF; BJ; CF; CG; CI; CM; GA; GN; GQ; GW; ML; MR; NE; SN; TD; TG; BW; GH; GM; KE; LS; MW; MZ; NA; SD; SL; SZ; TZ; UG; ZM; ZW; AM; AZ; BY; KG; KZ; MD; RU; TJ; TM

7/3, K/3 (Item 3 from file: 399)
 DI ALOG(R) File 399: CA SEARCH(R)
 (c) 2009 American Chemical Society. All rts. reserv.

140230578 CA: 140(15)230578h PATENT
 Sequences of immunostimulatory oligonucleotides and therapeutic use for immune related diseases
 INVENTOR(AUTHOR): Krieg, Arthur M; Samulowitz, Ulrike; Vollmer, Joerg; Uhlmann, Eugen; Jurk, Marion; Lipford, Grayson; Rankin, Robert
 LOCATION: USA
 ASSIGNEE: Colley Pharmaceutical Group, Inc.; Colley Pharmaceutical GmbH
 PATENT: PCT International ; WO 200416805 A2 DATE: 20040226
 APPLICATION: WO 2003US25935 (20030819) *US PV404479 (20020819) *US PV404820 (20020819) *US PV429701 (20021127) *US PV447377 (20030214)
 PAGES: 276 pp. CODEN: PIXXD2 LANGUAGE: English
 PATENT CLASSIFICATIONS:
 CLASS: C12Q-000/A
 DESI GNATED COUNTRIES: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BY; BZ; CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DZ; EC; EE; ES; FI; GB; GD; GE; GH; GM; HR; HU; ID; IL; IN; IS; JP; KE; KG; KP; KR; KZ; LC; LK; LR; LS; LT; LU; LV; MA; MD; MG; MK; MN; MW; MX; MZ; NI; NO; NZ; OM; PG; PH; PL; PT; RO; RU; SC; SD; SE; SG; SK; SL; SY; TJ; TM; TN; TR; TT; TZ; UA; UG; UZ; VC; VN; YU; ZA; ZW; AM; AZ; BY; KG; KZ; MD; RU; TJ; TM DESI GNATED REGIONAL: GH; GM; KE

10789353a.txt

; LS; MW; MZ; SD; SL; SZ; TZ; UG; ZM; ZW; AT; BE; BG; CH; CY; CZ; DE; DK;
EE; ES; FI; FR; GB; GR; HU; IE; IT; LU; MC; NL; PT; RO; SE; SI; SK; TR; BF;
BJ; CF; CG; CI; CM; GA; GN; GQ; GW; ML; MR; NE; SN; TD; TG
? e au=vollmer, j?

Ref	Items	Index-term
E1	1	AU=VOLLMER, J*
E2	1	AU=VOLLMER, J- Y
E3	0	*AU=VOLLMER, J?
E4	1	AU=VOLLMER, JAMES
E5	6	AU=VOLLMER, JAMES M
E6	16	AU=VOLLMER, JAMES M
E7	2	AU=VOLLMER, JAMES M CHAEL
E8	1	AU=VOLLMER, JANI CE
E9	1	AU=VOLLMER, JANS JUERGEN
E10	2	AU=VOLLMER, JASON
E11	1	AU=VOLLMER, JEAN P.
E12	3	AU=VOLLMER, JEAN PI ERRE

Enter P or PAGE for more

? e au=vollmer, j org

Ref	Items	Index-term
E1	1	AU=VOLLMER, JOHN JOCHEN
E2	8	AU=VOLLMER, JOHN W
E3	24	*AU=VOLLMER, JORG
E4	1	AU=VOLLMER, JORG HEI NZ
E5	1	AU=VOLLMER, JOSEPH
E6	2	AU=VOLLMER, JOSEPH G
E7	2	AU=VOLLMER, JOSEPH GERARD
E8	1	AU=VOLLMER, JOSEPH H.
E9	1	AU=VOLLMER, JOSEPH HARRY
E10	3	AU=VOLLMER, JR., H. D.
E11	3	AU=VOLLMER, JUDI TH
E12	15	AU=VOLLMER, JUERGEN

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? s e3- e4

24 AU=VOLLMER, JORG
1 AU=VOLLMER, JORG HEI NZ

S8 25 E3- E4

? s s8 and phosphodi ester

25 S8
37178 PHOSPHODI ESTER

S9 1 S8 AND PHOSPHODI ESTER

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>>>Duplicate detection is not supported for File 393.

>>>Duplicate detection is not supported for File 391.

>>>Records from unsupported files will be retained in the RD set.

S10 1 RD (unique items)

? t s10/3, k/1

>>>KW C option is not available in file(s): 399

10/3, K/1 (Item 1 from file: 399)

DI ALOG(R) File 399: CA SEARCH(R)

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138203655 CA: 138(14) 203655h PATENT

Oligonucleotides containing stimulatory phosphorothioate motif and
neutralizing motif for treating infections, allergies and cancers

10789353a.txt

INVENTOR(AUTHOR): Krieg, Arthur M; Vollmer, Jorg; Uhlman, Eugen
LOCATION: USA
ASSIGNEE: Coley Pharmaceutical Group, Inc.; Coley Pharmaceutical GmbH.
; University of Iowa Research Foundation
PATENT: PCT International ; WO 200315711 A2 DATE: 20030227
APPLICATION: WO 2002US26468 (20020819) *US PV313273 (20010817) *US
PV393952 (20020703)
PAGES: 115 pp. CODEN: PIXXD2 LANGUAGE: English
PATENT CLASSIFICATIONS:

CLASS: A61K-000/A

DESIGNATED COUNTRIES: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BY; BZ;
CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DZ; EC; EE; ES; FI; GB; GD; GE; GH;
GM; HR; HU; ID; IL; IN; IS; JP; KE; KG; KP; KR; KZ; LC; LK; LR; LS; LT; LU;
LV; MA; MD; MG; MK; MN; MW; MX; MY; NO; NZ; OM; PH; PL; PT; RO; RU; SD; SE;
SG; SI; SK; SL; TJ; TM; TN; TR; TT; TZ; UA; UG; UZ; VN; YU; ZA; ZW AM; AZ;
BY; KG; KZ; MD; RU; TJ; TM DESIGNATED REGIONAL: GH; GM; KE; LS; MW; MZ; SD
; SL; SZ; TZ; UG; ZM; ZW AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR;
GB; GR; IE; IT; LU; MC; NL; PT; SE; SK; TR; BF; BJ; CF; CG; CI; CM; GA; GN;
GQ; GW; ML; MR; NE; SN; TD; TG
? e au=uhlmann, eugen?

Ref	Items	Index-term
E1	565	AU=UHLMANN, EUGEN
E2	2	AU=UHLMANN, EUGEN DR
E3	0	*AU=UHLMANN, EUGEN?
E4	1	AU=UHLMANN, EUGENE
E5	3	AU=UHLMANN, EUGENIE V
E6	8	AU=UHLMANN, EUGENIE V.
E7	2	AU=UHLMANN, EUGENIE VICTORIA
E8	32	AU=UHLMANN, F
E9	8	AU=UHLMANN, F H
E10	2	AU=UHLMANN, F HERMANN
E11	114	AU=UHLMANN, F.
E12	3	AU=UHLMANN, F. H

Enter P or PAGE for more

? s e1-e3

565 AU=UHLMANN, EUGEN
2 AU=UHLMANN, EUGEN DR
0 AU=UHLMANN, EUGEN?

S11 567 E1-E3

? s s11 and phosphodiester

567 S11
37178 PHOSPHODIESTER

S12 8 S11 AND PHOSPHODIESTER

? rd

>>>Duplicate detection is not supported for File 393.

>>>Duplicate detection is not supported for File 391.

>>>Records from unsupported files will be retained in the RD set.

S13 8 RD (unique items)

? t s13/3, k/1-8

>>>KW C option is not available in file(s): 399

13/3, K/1 (Item 1 from file: 393)

DIALOG(R) File 393: Beilstein Database - Abstracts

(c) 2008 Beilstein GmbH. All rights reserved.

Beilstein Abstract Id: 6219964

Title: Influence of the Type of Junction in DNA-3'-Peptide Nucleic Acid
(PNA) Chimeras on Their Binding Affinity to DNA and RNA

10789353a.txt

Document Type: Journal Record Type: Abstract

Author: Greiner, Beate; Breipohl, Gerhard; Uhlmann, Eugen

Citation: Helv. Chim. Acta (1999) Series: 82-12, 2151 - 2159 CODEN: HCACAV
Language: English

Abstract Language: English

Author: Greiner, Beate; Breipohl, Gerhard; Uhlmann, Eugen

... Abstract: duplex stabilization was determined to be in the order O'S
ca. NH, reordering the phosphodiester bridge the most
favored linkage at the DNA/PNA junction. The observed strong
duplex-destabilizing...

13/3, K/2 (Item 2 from file: 393)

DI ALOG(R) File 393: Beilstein Database - Abstracts

(c) 2008 Beilstein GmbH. All rights reserved.

Beilstein Abstract Id: 5780737

Title: Nucleotide. XV. Synthese und Eigenschaften von
2'-O-t-Butyldimethylsilyl-5'-O-monomethoxytritylribonucleosid-3'
-phosphotriestern, Ausgangssubstanzen fuer Oligonucleotid-Synt
hesen

Document Type: Journal Record Type: Abstract

Author: Silber, Gunter; Flockerzi, Dieter; Varma, Rajendra Singh;
Charubala, Ramamurthy; Uhlmann, Eugen; Pfeiderer,
Wolfgang

Citation: Helv. Chim. Acta (1981) Series: 64-5, 1704-1716 CODEN: HCACAV
Language: German

Abstract Language: English

Author: Silber, Gunter; Flockerzi, Dieter; Varma, Rajendra Singh;
Charubala, Ramamurthy; Uhlmann, Eugen; Pfeiderer,
Wolfgang

... Abstract: 15-23 with free HO-C(5') could be obtained by detritylation
and the 3'-phosphodiester triethylammonium salts 24-32 by
deblocking of the cyanoethyl and the 2,5-dichlorophenyl group
...

13/3, K/3 (Item 1 from file: 399)

DI ALOG(R) File 399: CA SEARCH(R)

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150258230 CA: 150(13)258230u PATENT

Combination motif immune stimulatory oligonucleotides with improved
activity

INVENTOR(AUTHOR): Uhlmann, Eugen; Krieg, Arthur M; Hanson, Douglas
Charles; Samulowitz, Ulrike

LOCATION: USA

ASSIGNEE: Pfizer Inc.; Colley Pharmaceutical Group, Inc.; Colley
Pharmaceutical GmbH.

PATENT: PCT International ; WO 200922215 A1 DATE: 20090219

APPLICATION: WO 20081B2102 (20080805) *US 2007PV964477 (20070813)

PAGES: 73pp. CODEN: PIXXD2 LANGUAGE: English

PATENT CLASSIFICATIONS:

IPC/8 + Level Value Position Status Version Action Source Office:

A61K-0031/7088 A I F B 20060101 H EP

C12N-0015/11 A I L B 20060101 H EP

DESIGNATED COUNTRIES: AE; AG; AL; AM; AO; AT; AU; AZ; BA; BB; BG; BH; BR;
BW; BY; BZ; CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DO; DZ; EC; EE; EG; ES;
FI; GB; GD; GE; GH; GM; GT; HN; HR; HU; ID; IL; IN; IS; JP; KE; KG; KM; KN;
KP; KR; KZ; LA; LC; LK; LR; LS; LT; LU; LY; MA; MD; ME; MG; MK; MN; MW; MX;
MY; MZ; NA; NG; NI; NO; NZ; OM; PG; PH; PL; PT; RO; RS; RU; SC; SD; SE; SG;

10789353a.txt

SK; SL; SM; ST; SV; SY; TJ; TM; TN; TR DESIGNATED REGIONAL: AT; BE; BG; CH
; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HU; IE; IS; IT; LT; LU; LV;
MC; MT; NL; NO; PL; PT; RO; SE; SI; SK; TR; BF; BJ; CF; CG; CI; CM; GA; GN;
GQ; GW; ML; MR; NE; SN; TD; TG; BW; GH; GM; KE; LS; MW; MZ; NA; SD; SL; SZ;
TZ; UG; ZM; ZW AM; AZ; BY; KG; KZ; MD; RU; TJ; TM

13/3, K/4 (Item 2 from file: 399)
DI ALOG(R) File 399: CA SEARCH(R)
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150001273 CA: 150(1)1273u PATENT
PCR sequences of oligoribonucleotides for disease treatment
INVENTOR(AUTHOR): Vollmer, Joerg; Uhlmann, Eugen
LOCATION: Germany,
ASSIGNEE: Coley Pharmaceutical Gmb.H.
PATENT: PCT International ; WO 2008139262 A2 DATE: 20081120
APPLICATION: WO 20071B4593 (20071026) *US 2006PV854585 (20061026)
PAGES: 110pp. CODEN: PIXXD2 LANGUAGE: English
PATENT CLASSIFICATIONS:

IPC/8 + Level Value Position Status Version Action Source Office:

C12N-0015/11 A I F B 20060101 H EP

A61K-0031/7088 A I L B 20060101 H EP

C07H-0021/02 A I L B 20060101 H EP

DESIGNATED COUNTRIES: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BH; BR; BW
BY; BZ; CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DO; DZ; EC; EE; EG; ES; FI;
GB; GD; GE; GH; GM; GT; HN; HR; HU; ID; IL; IN; IS; JP; KE; KG; KM; KN; KP;
KR; KZ; LA; LC; LK; LR; LS; LT; LU; LY; MA; MD; ME; MG; MK; MN; MW; MX; MY;
MZ; NA; NG; NI; NO; NZ; OM; PG; PH; PL; PT; RO; RS; RU; SC; SD; SE; SG; SK;
SL; SM; SV; SY; TJ; TM; TN; TR; TT; TZ DESIGNATED REGIONAL: AT; BE; BG; CH
; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HU; IE; IS; IT; LT; LU; LV; MC;
MT; NL; PL; PT; RO; SE; SI; SK; TR; BF; BJ; CF; CG; CI; CM; GA; GN; GQ; GW
ML; MR; NE; SN; TD; TG; BW; GH; GM; KE; LS; MW; MZ; NA; SD; SL; SZ; TZ; UG;
ZM; ZW AM; AZ; BY; KG; KZ; MD; RU; TJ; TM

13/3, K/5 (Item 3 from file: 399)
DI ALOG(R) File 399: CA SEARCH(R)
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142462266 CA: 142(25)462266z PATENT
QpG immunostimulatory nucleic acids and oligonucleotide analogs for
enhancing immune response of vaccines against infection, allergy and
cancer
INVENTOR(AUTHOR): Uhlmann, Eugen; Vollmer, Joerg; Krieg, Arthur M.; Noll,
Bernhard O.
LOCATION: Germany,
ASSIGNEE: Coley Pharmaceutical Gmb.H.; Coley Pharmaceutical Group, Inc.
PATENT: PCT International ; WO 200542018 A2 DATE: 20050512
APPLICATION: WO 2004US36240 (20041029) *US 2003PV516193 (20031030)
PAGES: 113 pp. CODEN: PIXXD2 LANGUAGE: English
PATENT CLASSIFICATIONS:

CLASS: A61K-039/39A; A61P-031/00B; A61P-037/08B; A61P-035/00B

DESIGNATED COUNTRIES: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BW BY;
BZ; CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DZ; EC; EE; EG; ES; FI; GB; GD;
GE; GH; GM; HR; HU; ID; IL; IN; IS; JP; KE; KG; KP; KR; KZ; LC; LK; LR; LS;
LT; LU; LV; MA; MD; MG; MK; MN; MW; MX; MZ; NA; NI; NO; NZ; OM; PG; PH; PL;
PT; RO; RU; SC; SD; SE; SG; SK; SL; SY; TJ; TM; TN; TR; TT; TZ; UA; UG; US;
UZ; VC; VN; YU; ZA; ZM; ZW DESIGNATED REGIONAL: BW; GH; GM; KE; LS; MW; MZ
; NA; SD; SL; SZ; TZ; UG; ZM; ZW AM; AZ; BY; KG; KZ; MD; RU; TJ; TM; AT;
BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HU; IE; IT; LU; MC; NL;
PL; PT; RO; SE; SI; SK; TR; BF; BJ; CF; CG; CI; CM; GA; GN; GQ; GW; ML; MR;
NE; SN; TD; TG

13/3, K/6 (Item 4 from file: 399)
 DIALOG(R) File 399: CA SEARCH(R)
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142372464 CA: 142(20)372464h PATENT
 Compositions comprising immunostimulatory nucleic acid-lipophilic
 conjugates and antigen or therapeutic agent for treating allergy, cancer,
 infection and autoimmune disease
 INVENTOR(AUTHOR): Vollmer, Joerg; Krieg, Arthur M; Uhlmann, Eugen
 LOCATION: USA
 ASSIGNEE: Coley Pharmaceutical Group, Inc.; Coley Pharmaceutical GmbH
 PATENT: PCT International ; WO 200530259 A2 DATE: 20050407
 APPLICATION: WO 2004US31748 (20040927) *US 2003PV505977 (20030925)
 PAGES: 120 pp. CODEN: PIXXD2 LANGUAGE: English
 PATENT CLASSIFICATIONS:
 CLASS: A61K-047/48A
 DESIGNATED COUNTRIES: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BW; BY;
 BZ; CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DZ; EC; EE; EG; ES; FI; GB; GD;
 GE; GM; GR; HR; HU; ID; IL; IN; IS; JP; KE; KG; KP; KR; KZ; LC; LK; LR; LS;
 LT; LU; LV; MA; MD; MG; MK; MN; MW; MX; MZ; NA; NI; NO; NZ; OM; PG; PH; PL;
 PT; RO; RU; SC; SD; SE; SG; SK; SL; SY; TJ; TM; TN; TR; TT; TZ; UA; UG; US;
 UZ; VC; VN; YU; ZA; ZM; ZW DESIGNATED REGIONAL: BW; GH; GM; KE; LS; MW; MZ;
 NA; SD; SL; SZ; TZ; UG; ZM; ZW AM; AZ; BY; KG; KZ; MD; RU; TJ; TM; AT;
 BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HU; IE; IT; LU; MC; NL;
 PL; PT; RO; SE; SI; SK; TR; BF; BJ; CF; CG; CI; CM; GA; GN; GQ; GW; ML; MR;
 NE; SN; TD; TG

13/3, K/7 (Item 5 from file: 399)
 DIALOG(R) File 399: CA SEARCH(R)
 (c) 2009 American Chemical Society. All rts. reserv.

140230578 CA: 140(15)230578h PATENT
 Sequences of immunostimulatory oligonucleotides and therapeutic use for
 immune related diseases
 INVENTOR(AUTHOR): Krieg, Arthur M; Samulowitz, Ulrike; Vollmer, Joerg;
 Uhlmann, Eugen; Jurk, Marion; Lipford, Grayson; Rankin, Robert
 LOCATION: USA
 ASSIGNEE: Coley Pharmaceutical Group, Inc.; Coley Pharmaceutical GmbH
 PATENT: PCT International ; WO 200416805 A2 DATE: 20040226
 APPLICATION: WO 2003US25935 (20030819) *US PV404479 (20020819) *US
 PV404820 (20020819) *US PV429701 (20021127) *US PV447377 (20030214)
 PAGES: 276 pp. CODEN: PIXXD2 LANGUAGE: English
 PATENT CLASSIFICATIONS:
 CLASS: C12Q-000/A
 DESIGNATED COUNTRIES: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BY; BZ;
 CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DZ; EC; EE; ES; FI; GB; GD; GE; GH;
 GM; GR; HR; HU; ID; IL; IN; IS; JP; KE; KG; KP; KR; KZ; LC; LK; LR; LS; LT; LU;
 LV; MA; MD; MG; MK; MN; MW; MX; MZ; NI; NO; NZ; OM; PG; PH; PL; PT; RO; RU;
 SC; SD; SE; SG; SK; SL; SY; TJ; TM; TN; TR; TT; TZ; UA; UG; UZ; VC; VN; YU;
 ZA; ZW AM; AZ; BY; KG; KZ; MD; RU; TJ; TM DESIGNATED REGIONAL: GH; GM; KE;
 LS; MW; MZ; SD; SL; SZ; TZ; UG; ZM; ZW AT; BE; BG; CH; CY; CZ; DE; DK;
 EE; ES; FI; FR; GB; GR; HU; IE; IT; LU; MC; NL; PT; RO; SE; SI; SK; TR; BF;
 BJ; CF; CG; CI; CM; GA; GN; GQ; GW; ML; MR; NE; SN; TD; TG

13/3, K/8 (Item 6 from file: 399)
 DIALOG(R) File 399: CA SEARCH(R)
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93114908 CA: 93(11)114908c JOURNAL

10789353a.txt

New improvements in oligonucleotide synthesis by use of the
p-nitrophenylethyl phosphate blocking group and its deprotection by DBU
or DBN

AUTHOR(S): Uhlmann, Eugen; Pfeleiderer, Wolfgang

LOCATION: Fac. Chem., Univ. Konstanz, D-7750, Konstanz, Fed. Rep. Ger.

JOURNAL: Tetrahedron Lett. DATE: 1980 VOLUME: 21 NUMBER: 13 PAGES:

1181-4 CODEN: TELEAY ISSN: 0040-4039 LANGUAGE: English

? e au=lipford, gr?

Ref	Items	Index-term
E1	44	AU=LI PFORD, GB
E2	3	AU=LI PFORD, GB*
E3	0	*AU=LI PFORD, GR?
E4	22	AU=LI PFORD, GRAYSON
E5	8	AU=LI PFORD, GRAYSON B
E6	63	AU=LI PFORD, GRAYSON B.
E7	2	AU=LI PFORD, GRAYSON BERNARD
E8	2	AU=LI PFORD, HEATHER
E9	1	AU=LI PFORD, HEATHER RICHTER
E10	3	AU=LI PFORD, J
E11	3	AU=LI PFORD, J.
E12	11	AU=LI PFORD, J. R.

Enter P or PAGE for more

? s e1-e6

44	AU=LI PFORD, GB
3	AU=LI PFORD, GB*
0	AU=LI PFORD, GR?
22	AU=LI PFORD, GRAYSON
8	AU=LI PFORD, GRAYSON B
63	AU=LI PFORD, GRAYSON B.

S14 140 E1-E6

? s s14 and phosphodiester

140	S14
37178	PHOSPHODI ESTER

S15 2 S14 AND PHOSPHODI ESTER

? rd

>>>Duplicate detection is not supported for File 393.

>>>Duplicate detection is not supported for File 391.

>>>Records from unsupported files will be retained in the RD set.

S16 2 RD (unique items)

? t s16/3,k/1-2

>>>KW C option is not available in file(s): 399

16/3,K/1 (Item 1 from file: 24)

DIALOG(R) File 24: CSA Life Sciences Abstracts

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0002855016 IP ACCESSION NO: 6931820

Toll-like receptor 9 binds single-stranded CpG DNA in a sequence- and pH-
dependent manner

Rutz, Mark; Metzger, Jochen; Gellert, Tanja; Lippa, Peter; Lipford,
Grayson B; Wagner, Hermann; Bauer, Stefan
Institute for Medical Microbiology, Hygiene and Immunology, Munich,
Germany, [mailto:stefan.bauer@rz.tum.de]

European Journal of Immunology, v 34, n 9, p 2541-2550, 2004
PUBLICATION DATE: 2004

10789353a.txt

PUBLISHER: Wiley-VCH, Postfach 101161 Weinheim 69451 Germany,
[mailto:info@wiley-vch.de], [URL: http://www.wiley-vch.de/publish/en/]

DOCUMENT TYPE: Journal Article

RECORD TYPE: Abstract

LANGUAGE: English

SUMMARY LANGUAGE: English

ISSN: 0014-2980

FILE SEGMENT: Immunology Abstracts

Rutz, Mark; Metzger, Jochen; Gellert, Tanja; Lippa, Peter; Lipford,
Grayson B; Wagner, Hermann; Bauer, Stefan

ABSTRACT:

... that TLR9 binds directly and sequence-specifically to single-stranded
unmethylated CpG-DNA containing a phosphodiester backbone.
TLR9-CpG-DNA interaction occurs at the acidic pH (6.5-5.0) found...

16/3, K/2 (Item 1 from file: 399)

DI ALOG(R) File 399: CA SEARCH(R)

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140230578 CA: 140(15)230578h PATENT

Sequences of immunostimulatory oligonucleotides and therapeutic use for
immune related diseases

INVENTOR(AUTHOR): Krieg, Arthur M; Samulowitz, Ulrike; Vollmer, Joerg;
Uhlmann, Eugen; Jurk, Marion; Lipford, Grayson; Rankin, Robert

LOCATION: USA

ASSIGNEE: Coley Pharmaceutical Group, Inc.; Coley Pharmaceutical GmbH

PATENT: PCT International; WO 200416805 A2 DATE: 20040226

APPLICATION: WO 2003US25935 (20030819) *US PV404479 (20020819) *US
PV404820 (20020819) *US PV429701 (20021127) *US PV447377 (20030214)

PAGES: 276 pp. CODEN: PIXXD2 LANGUAGE: English

PATENT CLASSIFICATIONS:

CLASS: C12Q 000/ A

DESIGNATED COUNTRIES: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BY; BZ;
CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DZ; EC; EE; ES; FI; GB; GD; GE; GH;
GM; HR; HU; ID; IL; IN; IS; JP; KE; KG; KP; KR; KZ; LC; LK; LR; LS; LT; LU;
LV; MA; MD; MG; MK; MN; MW; MX; MZ; NI; NO; NZ; OM; PG; PH; PL; PT; RO; RU;
SC; SD; SE; SG; SK; SL; SY; TJ; TM; TN; TR; TT; TZ; UA; UG; UZ; VC; VN; YU;
ZA; ZW AM; AZ; BY; KG; KZ; MD; RU; TJ; TM DESIGNATED REGIONAL: GH; GM; KE
; LS; MW; MZ; SD; SL; SZ; TZ; UG; ZM; ZW AT; BE; BG; CH; CY; CZ; DE; DK;
EE; ES; FI; FR; GB; GR; HU; IE; IT; LU; MC; NL; PT; RO; SE; SI; SK; TR; BF;
BJ; CF; CG; CI; CM; GA; GN; GQ; GW; ML; MR; NE; SN; TD; TG

? e au=rankin, rob?

Ref	Items	Index-term
E1	7	AU=RANKIN, RN
E2	2	AU=RANKIN, RN*
E3	0	*AU=RANKIN, ROB?
E4	1	AU=RANKIN, ROBB E.
E5	23	AU=RANKIN, ROBERT
E6	4	AU=RANKIN, ROBERT A
E7	5	AU=RANKIN, ROBERT A.
E8	1	AU=RANKIN, ROBERT C.
E9	1	AU=RANKIN, ROBERT CARTER
E10	1	AU=RANKIN, ROBERT EDWARD
E11	1	AU=RANKIN, ROBERT JOHN, JR.
E12	8	AU=RANKIN, ROBERT L.

Enter P or PAGE for more

? s e1-e12

10789353a.txt

```
7 AU=RANKI N, RN
2 AU=RANKI N, RN*
0 AU=RANKI N, ROB?
1 AU=RANKI N, ROBB E.
23 AU=RANKI N, ROBERT
4 AU=RANKI N, ROBERT A
5 AU=RANKI N, ROBERT A.
1 AU=RANKI N, ROBERT C.
1 AU=RANKI N, ROBERT CARTER
1 AU=RANKI N, ROBERT EDWARD
1 AU=RANKI N, ROBERT JOHN, JR.
8 AU=RANKI N, ROBERT L.
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S17

54 E1-E12

? rd

>>>Duplicate detection is not supported for File 393.

>>>Duplicate detection is not supported for File 391.

>>>Records from unsupported files will be retained in the RD set.

S18 46 RD (unique items)

? s s18 and phosphodiester

46 S18

37178 PHOSPHODIESTER

S19

1 S18 AND PHOSPHODIESTER

? rd

>>>Duplicate detection is not supported for File 393.

>>>Duplicate detection is not supported for File 391.

>>>Records from unsupported files will be retained in the RD set.

S20 1 RD (unique items)

? t s20/3, k/1

>>>KW C option is not available in file(s): 399

20/3, K/1 (Item 1 from file: 399)

DIALOG(R) File 399: CA SEARCH(R)

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140230578 CA: 140(15) 230578h PATENT

Sequences of immunostimulatory oligonucleotides and therapeutic use for immune related diseases

INVENTOR(AUTHOR): Krieg, Arthur M; Samulowitz, Ulrike; Vollmer, Joerg; Uhlmann, Eugen; Jurk, Marion; Lipford, Grayson; Rankin, Robert

LOCATION: USA

ASSIGNEE: Coley Pharmaceutical Group, Inc.; Coley Pharmaceutical GmbH

PATENT: PCT International ; WO 200416805 A2 DATE: 20040226

APPLICATION: WO 2003US25935 (20030819) *US PV404479 (20020819) *US PV404820 (20020819) *US PV429701 (20021127) *US PV447377 (20030214)

PAGES: 276 pp. CODEN: PIXXD2 LANGUAGE: English

PATENT CLASSIFICATIONS:

CLASS: C12Q 000/ A

DESIGNATED COUNTRIES: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BY; BZ;

CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DZ; EC; EE; ES; FI; GB; GD; GE; GH; GM; HR; HU; ID; IL; IN; IS; JP; KE; KG; KP; KR; KZ; LC; LK; LR; LS; LT; LU; LV; MA; MD; MG; MK; MN; MW; MX; MZ; NI; NO; NZ; OM; PG; PH; PL; PT; RO; RU; SC; SD; SE; SG; SK; SL; SY; TJ; TM; TN; TR; TT; TZ; UA; UG; UZ; VC; VN; YU; ZA; ZW AM; AZ; BY; KG; KZ; MD; RU; TJ; TM DESIGNATED REGIONAL: GH; GM; KE; LS; MW; MZ; SD; SL; SZ; TZ; UG; ZM; ZW AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HU; IE; IT; LU; MC; NL; PT; RO; SE; SI; SK; TR; BF;

Set Items Description

--- -----
 ? e au=krieg, a?

Ref	Items	Index-term
E1	5	AU=KRI EG, A. H.
E2	7	AU=KRI EG, A. M.
E3	0	*AU=KRI EG, A?
E4	5	AU=KRI EG, ADAM J.
E5	11	AU=KRI EG, ADAM J.
E6	2	AU=KRI EG, ADAM JEREMY
E7	1	AU=KRI EG, ADRI AN
E8	2	AU=KRI EG, ADRI AN H
E9	2	AU=KRI EG, AF
E10	3	AU=KRI EG, AH
E11	1	AU=KRI EG, AJ
E12	18	AU=KRI EG, ALEXANDER

Enter P or PAGE for more

? s e2

S1 7 AU=KRI EG, A. M.

? rd

>>>Duplicate detection is not supported for File 393.

>>>Duplicate detection is not supported for File 391.

>>>Records from unsupported files will be retained in the RD set.

S2 5 RD (unique items)

? t s2/3, k/1-5

>>>KW C option is not available in file(s): 399

2/3, K/1 (Item 1 from file: 103)

DI ALOG(R) File 103: ENERGY SCI TEC

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07772558 OSTI; SCA 550400; 550900; 550700; 550300; PA- EDB-96-040383; SN 96001541589; TVI 96008

Title: CpG DNA: A pathogenic factor in systemic lupus erythematosus?

Author(s): Krieg, A. M. [Univ. of Iowa College of Medicine, Iowa City, IA (United States)]

Journal Name: Journal of Clinical Immunology

Source: Journal Name: Journal of Clinical Immunology; Journal Volume: 15; Journal Issue: 6; Other Information: PBD: Nov 1995 ISSN: 0271-9142

Publication Date: 19951101

Availability Date: 20091216

OSTI Number(s): OSTI ID 182167

Contract Number (Non-DOE): Journal ID JCI MDO; Other CNN Grant R29-AR42556-01; TRN TRN 96000734-0001

Language: English

Medium Dimensions: Medium X; Size: pp. 284-292

Author(s): Krieg, A. M. [Univ. of Iowa College of Medicine, Iowa City, IA (United States)]

2/3, K/2 (Item 2 from file: 103)

DI ALOG(R) File 103: ENERGY SCI TEC

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07552420 NLM; NLM 91-01863; EDB-91-095904

Title: Association of murine lupus and thymic full-length endogenous retroviral expression maps to a bone marrow stem cell

Author(s): Krieg, A. M.; Gourley, M. F.; Steinberg, A. D. (National

10789353a.txt

Institutes of Health, Bethesda, MD (USA)
Sponsoring Organization: Not Available
Journal Name: Journal of Immunology
Source: Journal Name: Journal of Immunology; (USA); Journal Volume: 146:9
Codens: : JOIM ISSN: 0022-1767
Publication Date: 19910501
Availability Date: 20091216
OSTI Number(s): OSTI ID 5760970
Contract Number (DOE): None
Language: English
Medium Dimensions: Medium X; Size: Pages: 3002-5

Author(s): Krieg, A.M..

2/3, K/3 (Item 1 from file: 8)
DIALOG(R) File 8: Ei Compendex(R)
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1209947422 E.I. COMPENDEX No: 20091111956701
Immunotherapeutic applications of QpG oligodeoxynucleotide TLR9 agonists
Vollmer, Jorg; Krieg, Arthur M
Corresp. Author/Affil: Krieg, A.M.: Pfizer Inc., 620 Memorial
Drive, Cambridge, MA 02139, United States
Corresp. Author email: arthur.krieg@pfizer.com
Advanced Drug Delivery Reviews (Adv. Drug Deliv. Rev.) (Netherlands)
2009, 61/3 (195-204)
Publication Date: 20090328
Publisher: Elsevier
CODEN: ADDRE ISSN: 0169-409X
Publisher Item Identifier: S0169409X09000039
DOI: 10.1016/j.addr.2008.12.008
Document Type: Review; Journal Record Type: Abstract
Language: English Summary Language: English
Number of References: 205

Corresp. Author/Affil: Krieg, A.M.: Pfizer Inc., 620 Memorial
Drive, Cambridge, MA 02139, United States

2/3, K/4 (Item 2 from file: 8)
DIALOG(R) File 8: Ei Compendex(R)
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0017639259 E.I. COMPENDEX No: 20071110490747
Toll-free vaccines?
Krieg, Arthur M
Corresp. Author/Affil: Krieg, A.M.: Coley Pharmaceutical Group,
Inc., 93 Worcester Street, Wellesley, MA 02481, United States
Corresp. Author email: akrieg@coleypharma.com
Nature Biotechnology (Nat. Biotechnol.) (United States) 2007, 25/3
(303-305)
Publication Date: 20070321
Publisher: Nature Publishing Group
CODEN: NABI F ISSN: 1087-0156 eISSN: 1546-1696
Publisher Item Identifier: NBT0307303
DOI: 10.1038/nbt0307-303
Document Type: Short Survey; Journal Record Type: Abstract
Treatment: T; (Theoretical)
Language: English Summary Language: English
Number of References: 11

Corresp. Author/Affil: Krieg, A.M.: Coley Pharmaceutical Group,
Page 36

Inc., 93 Worcester Street, Wellesley, MA 02481, United States

2/3, K/5 (Item 1 from file: 149)
 DIALOG(R) File 149: TGG Health&Wellness DB(SM)
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03942337 SUPPLIER NUMBER: 190749591
 Toll-like receptor 9 (TLR9) agonists in the treatment of cancer.(Clinical
 report)
 Krieg, A. M
 Oncogene, 27, 2, 161(7)
 Jan 7,
 2008
 DOCUMENT TYPE: Clinical report PUBLICATION FORMAT: Magazine/ Journal
 ISSN: 0950-9232 LANGUAGE: English RECORD TYPE: Citation
 TARGET AUDIENCE: Academic

Krieg, A. M
 ? e au=krieg, a?

Ref	Items	Index-term
E1	5	AU=KRI EG, A. H.
E2	7	AU=KRI EG, A. M
E3	0 *	AU=KRI EG, A?
E4	5	AU=KRI EG, ADAM J
E5	11	AU=KRI EG, ADAM J.
E6	2	AU=KRI EG, ADAM JEREMY
E7	1	AU=KRI EG, ADRI AN
E8	2	AU=KRI EG, ADRI AN H
E9	2	AU=KRI EG, AF
E10	3	AU=KRI EG, AH
E11	1	AU=KRI EG, AJ
E12	18	AU=KRI EG, ALEXANDER

Enter P or PAGE for more
 ? page

Ref	Items	Index-term
E13	1	AU=KRI EG, ALEXYS R
E14	1	AU=KRI EG, ALEXYS R.
E15	1	AU=KRI EG, ALOYS
E16	7	AU=KRI EG, ALOYSI US
E17	143	AU=KRI EG, AM
E18	15	AU=KRI EG, AM*
E19	25	AU=KRI EG, ANDREAS
E20	1	AU=KRI EG, ANDREAS H.
E21	1	AU=KRI EG, ANJA
E22	1	AU=KRI EG, ARI BERT
E23	7	AU=KRI EG, ARTHUR
E24	1	AU=KRI EG, ARTHUR F

Enter P or PAGE for more
 ? s e23-24

>>>Term "24" in invalid position

? s e23-e24

	7	AU=KRI EG, ARTHUR
	1	AU=KRI EG, ARTHUR F
S3	8	E23- E24

? rd

>>>Duplicate detection is not supported for File 393.

>>>Duplicate detection is not supported for File 391.

>>>Records from unsupported files will be retained in the RD set.

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S4      8 RD (unique items)
? s s4 and tcgtcgttttgcgttttttcga
      8 S4
      2 TCGTCGTTTTGTCGTTTTTTTCGA
S5      0 S4 AND TCGTCGTTTTGTCGTTTTTTTCGA
? e au=krieg, arthur

```

Ref	Items	Index-term
E1	1	AU=KRI EG, ANJ A
E2	1	AU=KRI EG, ARI BERT
E3	7	*AU=KRI EG, ARTHUR
E4	1	AU=KRI EG, ARTHUR F
E5	11	AU=KRI EG, ARTHUR F.
E6	67	AU=KRI EG, ARTHUR M
E7	253	AU=KRI EG, ARTHUR M
E8	2	AU=KRI EG, B
E9	256	AU=KRI EG, B.
E10	4	AU=KRI EG, B. L.
E11	8	AU=KRI EG, B. L.
E12	1	AU=KRI EG, B. L. (PACI FI C GAS AND ELECTRI C CO., SAN

Enter P or PAGE for more

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? s e4-e7
      1 AU=KRI EG, ARTHUR F
      11 AU=KRI EG, ARTHUR F.
      67 AU=KRI EG, ARTHUR M
      253 AU=KRI EG, ARTHUR M
S6      332 E4- E7
? s s6 and (tcgtcgttttgcgttttttcga)
      332 S6
      2 TCGTCGTTTTGTCGTTTTTTTCGA
S7      0 S6 AND (TCGTCGTTTTGTCGTTTTTTTCGA)
? s s6 and (?tcgtcgttttgcgttttttcga?)
Processed 10 of 50 files ...
Processed 20 of 50 files ...
Processed 30 of 50 files ...
Processed 40 of 50 files ...
Processed 50 of 50 files ...
Completed processing all files
      332 S6
      0 ?TCGTCGTTTTGTCGTTTTTTTCGA?
S8      0 S6 AND ( ?TCGTCGTTTTGTCGTTTTTTTCGA?)
?
? ds

```

Set	Items	Description
S1	7	AU=' KRI EG, A. M '
S2	5	RD (unique items)
S3	8	E23- E24
S4	8	RD (unique items)
S5	0	S4 AND TCGTCGTTTTGTCGTTTTTTTCGA
S6	332	E4- E7
S7	0	S6 AND (TCGTCGTTTTGTCGTTTTTTTCGA)
S8	0	S6 AND (?TCGTCGTTTTGTCGTTTTTTTCGA?)

? ds

Set	Items	Description
S1	7	AU=' KRI EG, A. M '
S2	5	RD (unique items)
S3	8	E23- E24

S4 8 RD (unique items)
 S5 0 S4 AND TCGTCGTTTTGTCGTTTTTTTGA
 S6 332 E4- E7
 S7 0 S6 AND (TCGTCGTTTTGTCGTTTTTTTGA)
 S8 0 S6 AND (?TCGTCGTTTTGTCGTTTTTTTGA?)
 ? sTCGTCGTTTTGTCGTTTTTTTGA
 S9 2 TCGTCGTTTTGTCGTTTTTTTGA
 ? s TCGTCGTTTTGTCGTTTTTTTGA
 S10 2 TCGTCGTTTTGTCGTTTTTTTGA
 ? rd

>>>Duplicate detection is not supported for File 393.

>>>Duplicate detection is not supported for File 391.

>>>Records from unsupported files will be retained in the RD set.

S11 2 RD (unique items)
 ? t s11/3,k/1-2
 >>>KWC option is not available in file(s): 399

11/3, K/1 (Item 1 from file: 357)
 DI ALOG(R) File 357: Derwent Biotech Res.
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0354257 DBR Accession No.: 2004-26549 PATENT
 Identifying agonists of Toll-like receptor (TLR) signaling activity, useful
 therapeutically or prophylactically, comprises contacting an RPM 8226
 cell that expresses a TLR with a test compound and measuring TLR
 signaling activity - toll-like receptor and antagonist and agonist for
 use in disease therapy
 AUTHOR: VOLLMER J; JURK M; LIPFORD G B; SCHETTER C; FORSBACH A; KRIEG
 A M
 PATENT ASSIGNEE: COLEY PHARM GMBH; COLEY PHARM GROUP INC 2004
 PATENT NUMBER: WO 200494671 PATENT DATE: 20041104 WPI ACCESSION NO.:
 2004-795573 (200478)
 PRIORITY APPLIC. NO.: US 464588 APPLIC. DATE: 20030422
 NATIONAL APPLIC. NO.: WO 2004US12788 APPLIC. DATE: 20040422
 LANGUAGE: English

... ABSTRACT: base sequence TCGTCGTTTTGTCGTTTTGTCGTT (SEQ ID NO: 1),
 5' - TCGTCGTTTTGACGTTTTGTCGTT - 3' (SEQ ID NO: 139), 5' -
 TCGTCGTTTTGTCGTTTTTTTGA - 3' (SEQ ID NO: 140),
 5' - TCGTCGTTTTCGTCGTTTTCGTCGTT - 3' (SEQ ID NO: 141), 5' - TCGTCGTTTTCGTCGTTTTCGTCGTT - 3'...

11/3, K/2 (Item 2 from file: 357)
 DI ALOG(R) File 357: Derwent Biotech Res.
 (c) 2010 Thomson Reuters. All rts. reserv.

0351655 DBR Accession No.: 2004-23947 PATENT
 Inducing immune response in subject useful for preventing and/or treating
 viral infection e.g., human papilloma virus infection, involves
 topically administering oil-in-water emulsion and immunostimulatory
 nucleic acid, to subject - CpG immunostimulant oligonucleotide transfer
 and expression in host cell for nucleic acid vaccine and gene therapy
 AUTHOR: DAVIS H L; MCCLUSKIE M J
 PATENT ASSIGNEE: COLEY PHARM GROUP LTD 2004
 PATENT NUMBER: WO 200487203 PATENT DATE: 20041014 WPI ACCESSION NO.:
 2004-737575 (200472)
 PRIORITY APPLIC. NO.: US 461903 APPLIC. DATE: 20030410
 NATIONAL APPLIC. NO.: WO 2004IB1371 APPLIC. DATE: 20040401
 LANGUAGE: English

... ABSTRACT: has the nucleotide sequence of 5'-tcgtctttttgtcgttttgtcgtt-3',
5'-tcgtcgtttcgtcgtttcgtcgtt-3', 5'-tcgtcgtttttcggtcgtttt-3', 5'-
tcgtcgttttgtcgtttttttcga-3', 5'-tcgtcgtttttcgtgcgttttt-3', or
5'-tcgtcgttgtcgttttgtcgtt-3'. The immunostimulatory nucleic acid is a
class...